

# Detroit Diesel Engines

## 8.2 Liter Parts Catalog



**Detroit Diesel  
Allison**

# Parts Catalog

## Detroit Diesel Engines SERIES 8.2 LITER

August, 1985



### **Detroit Diesel Allison**

13400 Outer Drive, West  
Detroit, Michigan 48239-4001

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**NOTE:**

*This printed parts catalog is current as of date of issue. Interim revisions are available only on Microfiche. Either may be purchased from Detroit Diesel Allison Distributors. See your yellow pages—under Engines, Diesel.*

## **CAUTION METRICS AT WORK**

Detroit Diesel Engines contain parts dimensioned in the metric system as well as in the customary system. Many fasteners are metric and are very close in dimension to familiar customary fasteners in the inch system. It is important to note that, during any maintenance procedures, replacement fasteners must have the same measurements and strength as those removed, whether metric or customary. (Numbers on the heads of metric bolts and on surfaces of metric nuts indicate their strength. Customary bolts use radial lines for this purpose, while most customary nuts do not have strength markings.) Mismatched or incorrect fasteners can result in engine damage or malfunction, or possibly personal injury. Therefore, fasteners removed from the engine should be saved for re-use in the same locations whenever possible. Where the fasteners are not satisfactory for re-use, care should be taken to select a replacement that matches the original. For information and assistance, see your Detroit Diesel Allison Service Outlet.

*NOTE:* Metric Hardware is identified in the Parts Catalogs through its unique nomenclature. Conventional hardware can always be recognized by the inch marks '"'; common to diameter and length.

# GENERAL INFORMATION

## GENERAL INFORMATION

All engine components in this catalog are divided into twelve major groups of functionally related parts. A listing of the groups and their sub-groups appears under "Group Nomenclature" on page 5 of this section.

Within each sub-group different designs of similar equipment are shown, each being designated by a type number. The type number in one sub-group has no relationship to the same type number in another sub-group.

Each Engine Model is provided with a Model Index, which shows the Standard and Standard Option type numbers currently available on the model. All optional equipment type numbers are listed on the engine Option Label, as shown in the illustration below.

The names and type numbers of optional equipment built into the unit at the factory, are listed on this label, along with the unit model and serial number. Material not listed on the Option Label, is standard equipment and the type number is obtained from the model index.

Engines prior to serial number 8G27987 were built with standard equipment only. No optional equipment was offered. No option label was provided. A list of these models and their parts book types are shown on the chart at the beginning of the model index section.


To locate a part, first, establish the group where the part is used (see the Alphabetical Index or Group Nomenclature page) then, determine the type number for the group from the Model Index. With this information, turn to the proper group and locate the type number at the top of the page. All parts applicable to the type are indicated by the quantity shown in the column. An AR in this column indicates an "as required" quantity.

## EXAMPLE

For purposes of illustration, a model 4087-7100 unit will be used. The following examples cover the steps to be followed:

1. To determine the part number of the crankshaft, refer to the Model Index and establish that the crankshaft is type 74 in group 1.3000. Turn to group 1.3000 and locate type 74 at the top of the page. All items with a quantity in this column apply to this unit. In Sub-group 1.3001 crankshaft assy., the quantity in type 74 column shown the crankshaft to be part number 8920193.
2. To determine the proper starter motor for this unit refer to the Option Label and note that starting motor type number is 311, consult the group nomenclature page to establish that the starter motor is group 7.3000A. Now turn to group 7.3000A and find type 311 at the top of the page. The quantity shown in type 311 at sub-group 7.3001 shows the starting motor to be part number 1114934.

TYPE	EQUIPMENT
0598	F/W HOUSING
0967	FLYWHEEL
0947	DIPSTICK
0807	VENT SYSTEM
0212	WATER PUMP
0517	EXH MFLD
0173	INJECTOR
1601	GOVERNOR MECH
0647	ENGINE MOUNTS
0455	ROCKER COVER
NT	TIMING SPEC
NT	NAME PLATE



DETROIT DIESEL  
ALLISON DIV. G.M.C.

— OPTION LABEL —

## ASSEMBLY BREAKDOWN

The Assembly Breakdown section is designed to eliminate repeating components of assemblies and sub-assemblies. When the Assembly Breakdown is used it is always found at the end of the group it pertains to. The pages are numbered with an alphabetical prefix. Assemblies which make use of the Assembly Breakdown will have a note to that effect under the sub-group heading. The note will refer to the page on which the assembly is shown. The part number will appear in the first group of the Assembly Breakdown showing the quantity used in one of the alphabetically designated columns. All other items appearing in that column are components of the assembly.

## ALPHABETICAL INDEX

The Alphabetical Index following page 5 is particularly helpful when only a part name is known and the group can not readily be determined. Parts are listed alphabetically by noun name, followed by a description of the application of the part and the final group location. Component parts of assemblies are not listed since they will appear in the body of the book immediately following the assembly to which they belong.

## PARTS RELEASE

A parts Release on Microfiche, is issued periodically to keep this catalog up-to-date. It consists of revised Fiche for insertion in the set. All new Fiche carry a date of issue.

These should be inserted into the deck immediately upon receipt. Old Fiche may then be destroyed.

A checklist is included with each Microfiche update. This checklist will indicate, by date, those Fiche revised and reissued.

## MISCELLANEOUS

At the beginning of each of the sections of this catalog there are several pages of illustrations. In each section of the parts list figure numbers refer to illustrations

within that section only unless otherwise noted. In the majority of cases illustrations are typical, that is, they may represent more than one part number. For example, in the case of the flywheel housing, figure 5C of section 1.0000, a single housing is shown to represent all housings. Key numbers on illustrations are final group numbers.

In many instances a part has more than one application. Wherever a part appears in its second or third application the basic group is shown in parenthesis following the description.

Unless otherwise specified, standard bolts in the parts list are hexagon head. Other standard parts are described in detail.

The information and illustrations in this publication are based on the information in effect at the time of approval for printing. The right is reserved to make changes at any time without notice.

## YOUR PARTS ORDER WILL BE HANDLED MORE EFFICIENTLY IF YOU—

1. Provide the following information for material ordered:
  - A. Group in parts book in which it is specified.
  - B. Quantity desired.
  - C. Part Number.
  - D. Complete Nomenclature.
  - E. The Type number for the model concerned.
  - F. Complete unit model identification and serial number.
  - G. "TYPE" rather than "WRITE" the above information.
2. Furnish complete shipping instruction. This is particularly important in case the order is not to be handled in the regular manner. Indicate whether shipment should be made via parcel post, express, air freight, etc.
3. Confirm all telegraph and telephone orders immediately, clearly marking any such orders "CONFIRMING" to avoid duplication of shipment of such orders.

# GROUP NOMENCLATURE

1.0000	ENGINE (less major assemblies)	5.0000	COOLING SYSTEM (CONT'D)
1.1000	Cylinder Block	5.4000B	Fan Shroud
1.1000A	Air Box Drains	5.5000A	Heat Exchanger or Keel Cooling
1.2000	Cylinder Head	5.6000A	Raw Water Pump
1.2000A	Engine Lifter Bracket	5.7000A	Water Filter
1.3000	Crankshaft, Oil Seals and Stabilizers		
1.3000A	Crankshaft Front Cover	6.0000	EXHAUST SYSTEM
1.3000B	Vibration Damper	6.1000A	Exhaust Manifold and/or Connections
1.3000C	Crankshaft Pulley	6.2000A	Exhaust Muffler and/or Connections
1.3000D	Crankshaft Pulley Belt		
1.4000A	Flywheel	7.0000	ELECTRICAL--INSTRUMENTS
1.5000A	Flywheel Housing	7.1000A	Battery Charging Generator
1.5000B	Flywheel Housing Adaptor	7.2000A	Battery Cables
1.6000	Connecting Rod and Piston	7.2000B	Automatic Starting
1.7000	Camshaft and Gear Train	7.2000B	Automatic Starting (Twin and Quad)
1.7000A	Balance Weight Cover	7.3000A	Starting Motor
1.7000B	Accessory Drive	7.4000A	Instruments
1.8000	Valve and Injector Operating Mechanism	7.4000A	Instruments (Twin and Quad)
1.8000A	Rocker Cover	7.4000B	Tachometer Drive
		7.4000B	Tachometer Drive (Twin and Quad)
2.0000	FUEL SYSTEM	7.4000C	Shutoff, Alarm and O.S. Governor
2.1000A	Fuel Injector	7.4000C	Shutoff, Alarm and O.S. Governor (Twin and Quad)
2.2000	Fuel Pump	7.5000A	Power Generator
2.2000A	Fuel Pump Drain	7.6000A	Control Cabinet
2.3000A	Fuel Filter and Strainer	7.6000A	Control Cabinet (Twin and Quad)
2.3000A	Fuel Filter and Strainer (Twin and Quad)	7.7000A	Wiring Harness
2.4000	Fuel Manifold and/or Connections	7.8000A	Air Heater
2.4000A	Dual Fuel System	7.8000A	Air Heater (Twin and Quad)
2.5000A	Fuel Lines and Fuel Cooler	7.10000A	Hydraulic Governor Solenoid
2.5000A	Fuel Lines and Fuel Cooler (Twin and Quad)		
2.6000A	Fuel Tank	8.0000	POWER TAKE-OFF
2.6000B	Electric Governor	8.1000A	Power Take-off and/or Clutch
2.7000A	Mechanical Governor	8.1000A	Power Take-off and/or Clutch (Twin and Quad)
2.8000A	Hydraulic Governor	8.3000A	Torque Converter
2.9000	Injector Controls	8.3000A	Torque Converter (Twin and Quad)
2.9000	Injector Controls (Twin and Quad)	8.3000B	Transmission Lines
2.9000A	Throttle Controls		
2.9000A	Throttle Controls (Twin and Quad)	9.0000	TRANSMISSION AND PROPULSION
3.0000	AIR SYSTEM	9.1000A	Hydraulic Marine Gear
3.1000A	Air Cleaner and/or Adaptor	9.1000A	Hydraulic Marine Gear (Twin and Quad)
3.2000A	Air Silencer	9.2000A	Reverse and Reduction Gear (mechanical)
3.3000A	Air Inlet Housing	9.3000A	Power Transfer Gear
3.4000	Blower and Drive	9.3000A	Power Transfer Gear (Twin and Quad)
3.4000A	Blower Drive Shaft	9.4000	Transmission--Highway
3.4000B	Blower End Plate Cover	9.7000	Transmission--Off-highway
3.5000A	Turbocharger, Intercooler, and Aftercooler	9.9000	Transmission--Rail Car
4.0000	LUBRICATING SYSTEM	10.0000	SHEET METAL
4.1000A	Oil Pump	10.1000A	Engine Hood
4.1000B	Oil Distribution System		
4.1000C	Oil Pressure Regulator	11.0000	ENGINE MOUNTING
4.2000A	Oil Filter	11.1000A	Engine Mounting and Base
4.3000A	Oil Filter Lines	11.1000A	Engine Mounting and Base (Twin and Quad)
4.4000A	Oil Cooler and Marine Gear Lines		
4.5000A	Oil Filler	12.0000	MISCELLANEOUS
4.6000A	Dipstick	12.2000A	Bilge Pump
4.7000A	Oil Pan	12.3000A	Vacuum Pump
4.8000A	Ventilating System	12.4000A	Air Compressor
5.0000	COOLING SYSTEM	12.5000A	Hydraulic Pump
5.1000	Fresh Water Pump	12.6000A	Gasoline Starter
5.1000A	Fresh Water Pump Cover	12.6000B	Air Starter
5.2000A	Water Outlet Manifold and/or Elbow	12.6000C	Cold Weather Starting Aid
5.2000B	Thermostat	12.6000D	Hydraulic Starter
5.2000C	Water Bypass Tube	12.6000E	Hydraulic Starter Accessories
5.3000A	Radiator	12.8000A	Supplies
5.3000B	Water Connections	12.8000B	Fabrication Material
5.4000A	Fan	12.8000C	Miscellaneous Service Kits and Sets
		12.8000D	Miscellaneous Service Parts

## ALPHABETICAL INDEX

PART NAME	GROUP NO.	PART NAME	GROUP NO.
<b>A</b>		<b>B</b>	
ADAPTOR, AIR CLEANER MOUNTING	3. 1085	BUSHING, EXHAUST VALVE ROCKER ARM-LARGE	1. 8100
ADAPTOR, DIPSTICK	4. 6030	BUSHING, INTAKE VALVE ROCKER	1. 8105
ADAPTOR, EXHAUST OUTLET	6. 2120	BUSHING, OIL PUMP BODY	4. 1050
ADAPTOR, FLYWHEEL HOUSING	1. 5130		
ADAPTOR, OIL COOLER	4. 4110	<b>C</b>	
ADAPTOR, OIL FILTER COVER	4. 2291	CAGE, INJECTOR CHECK VALVE	2. 1205
ADAPTOR, OIL PAN REAR SEAL	4. 7022	CAGE, INJECTOR VALVE SPRING	2. 1257
ADAPTOR, TURBOCHARGER TO AIR INLET		CAM, RAW WATER PUMP BODY OFFSET	5. 6035
HOUSING	3. 5422	CAMSHAFT & GEAR TRAIN	1. 7000
AIR INLET HOUSING	3. 3000A	CAMSHAFT ASSY.	1. 7001
ARM ASSY., EXHAUST VALVE ROCKER	1. 8060	CAP, CRANKSHAFT MAIN BEARING	1. 3110
ARM ASSY., INJECTOR ROCKER	1. 8080	CAP, EXPANSION TANK	5. 5140
ARM ASSY., INTAKE VALVE ROCKER	1. 8075	CAP, GOVERNOR LOW SPEED SPRING	2. 7580
		CAP, OIL FILLER	4. 5010
<b>B</b>		CARRIER AND WEIGHT ASSY., GOVERNOR	2. 7330
BATTERY CHARGING GENERATOR	7. 1000A	CARRIER, GOVERNOR WEIGHT SHAFT	2. 7370
BEARING, BELT GUIDE	12. 4026	CLAMP, AIR SILENCER MOUNTING	3. 2013
BEARING, CAMSHAFT INTERMEDIATE	1. 7040	CLAMP, EXHAUST MANIFOLD FRESH WATER	
BEARING, CLUTCH DRIVE SHAFT	8. 1680	INLET HOSE	5. 3434
BEARING, CLUTCH PILOT	8. 1450	CLAMP, HEAT EXCHANGER FRESH WATER INLET	
BEARING, GOVERNOR OPERATING SHAFT-UPPER	2. 7260	HOSE	5. 3305
BEARING, GOVERNOR VARIABLE SPEED SPRING		CLAMP, HEAT EXCHANGER RAW WATER INLET	
LEVER	2. 7732	TUBE HOSE	5. 5480
BEARING, GOVERNOR VARIABLE SPEED SPRING		CLAMP, INJECTOR	2. 1270
LEVER SHAFT	2. 7712	CLAMP, OIL COOLER WATER INLET CONNECTION	5. 3366
BEARING, GOVERNOR WEIGHT RISER THRUST	2. 7460	CLAMP, OIL COOLER WATER INLET HOSE	4. 4214
BEARING, GOVERNOR WEIGHT SHAFT END	2. 7470	CLAMP, OIL COOLER WATER OUTLET HOSE	4. 4250
BEARING, RAW WATER PUMP	5. 6130	CLAMP, OIL COOLER WATER OUTLET TUBE HOSE	4. 4290
BEARING, ROTOR ASSY. SHAFT	3. 5027	CLAMP, TURBO TO AIR SILENCER HOSE	3. 2018
BELT, AIR COMPRESSOR DRIVE	12. 4045	CLIP, AIR COMPRESSOR LUBE OIL TUBE	12. 4080
BELT, GENERATOR DRIVE	7. 1575	CLIP, AIR COMPRESSOR WATER TUBE	12. 4095
BELT, HYDRAULIC PUMP DRIVE	12. 5009	CLIP, BREATHER TUBE	4. 8040
BELT, RAW WATER PUMP DRIVE	5. 6425	CLIP, CYLINDER HEAD INLET	2. 5180
BLADE, FAN	5. 4010	CLIP, FUEL PUMP TO FILTER HOSE	2. 5120
BLOCK, CYLINDER	1. 1001	CLIP, FUEL SUPPLY CROSSOVER TUBE	2. 5164
BLOCK, FUEL SYSTEM JUNCTION	2. 5250	CLIP, OIL FILTER LINES	4. 3045
BODY AND SEAL ASSY., EEC GOVERNOR	2. 6655	CLUTCH ASSY.	8. 1017
BODY ASSY., INJECTOR	2. 1020	COLLAR, CLUTCH RELEASE	8. 1295
BODY, FUEL PUMP	2. 2010	COLLAR, TURBOCHARGER ROTOR THRUST	3. 5034
BODY, RAW WATER PUMP	5. 6030	COMPRESSOR ASSY., AIR	12. 4001
BOLT, CRANKSHAFT MAIN BEARING CAP	1. 3140	CONNECTING ROD AND PISTON	1. 6000
BOLT, EXHAUST MANIFOLD TO HEAD	6. 1025	CONNECTING ROD ASSY.	1. 6001
BOLT, MANUAL SHUTDOWN STOP	2. 7811	CONNECTION, OIL COOLER WATER INLET	5. 3350
BOLT, ROCKER COVER	1. 8460	CONNECTOR, EXHAUST MANIFOLD FRESH	
BOOT, GOVERNOR TO INJECTOR LINK	2. 6635	WATER INLET	5. 3430
BOOT, GOVERNOR TO INJECTOR LINK	2. 7834	CONNECTOR, TURBOCHARGER EXHAUST INLET	3. 5305
BRACKET, AIR COMPRESSOR MOUNTING	12. 4010	CONTAINER, INJECTOR SHIPPING	2. 1010
BRACKET, BELT GUIDE	12. 4019	CORE, OIL COOLER-ENGINE	4. 4001
BRACKET, BREATHER EXTENSION PIPE	4. 8183	COUPLING, FUEL PUMP DRIVE	2. 2230
BRACKET, ENGINE LIFTER-FRONT	1. 2070	COUPLING, MARINE GEAR DRIVE	9. 1006
BRACKET, ENGINE LIFTER-REAR	1. 2080	COVER ASSY., GOVERNOR-COMplete	2. 7045
BRACKET, FILTER TO CYLINDER HEAD CLIP	2. 5190	COVER ASSY., ROCKER	1. 8450
BRACKET, FUEL FILTER MOUNTING	2. 3530	COVER, CLUTCH HOUSING INSPECTION HOLE	8. 1060
BRACKET, FUEL PUMP TO FILTER HOSE CLIP	2. 5130	COVER, CRANKSHAFT FRONT	1. 3160
BRACKET, GENERATOR ADJUSTING STRAP	7. 1582	COVER, CYLINDER BLOCK TURBO MOUNTING	
BRACKET, GENERATOR MOUNTING	7. 1595	HOLE	1. 1082
BRACKET, HEAT EXCHANGER MOUNTING	5. 5070	COVER, CYLINDER BLOCK VALLEY	1. 1055
BRACKET, HYDRAULIC PUMP SUPPORT	12. 5023	COVER, CYLINDER HEAD GOVERNOR HOLE	1. 2050
BRACKET, INJECTOR CONTROL TUBE	2. 9003	COVER, CYLINDER HEAD WATER HOLE	1. 2043
BRACKET, OIL FILTER MOUNTING	4. 2440	COVER, FLYWHEEL HOUSING INSPECTION HOLE	1. 5080
BRACKET, OIL PUMP SCREEN SUPPORT	4. 1540	COVER, FRESH WATER PUMP BODY	5. 1031
BRACKET, RAW WATER PUMP MOUNTING	5. 6380	COVER, FUEL FILTER	2. 3390
BRACKET, ROCKER SHAFT	1. 8170	COVER, FUEL PUMP	2. 2030
BRACKET, THROTTLE BOOSTER SPRING	2. 7975	COVER, FUEL STRAINER	2. 3080
BUSHING INJECTOR ROCKER ARM-LARGE	1. 8110	COVER, GOVERNOR VARIABLE SPEED SPRING	
BUSHING, CONNECTING ROD PISTON PIN	1. 6040	HOUSING	2. 7692

## ALPHABETICAL INDEX

## PART NAME

## GROUP NO.

## C

COVER, GOVERNOR WEIGHT HOUSING	2. 7520
COVER, HEAT EXCHANGER	5. 5030
COVER, OIL PUMP	4. 1220
COVER, RAW WATER PUMP	5. 6090
COVER, TURBOCHARGER OIL RETURN	3. 5503
CRANKSHAFT	1. 3000
CRANKSHAFT ASSY.	1. 3001
CRANKSHAFT PULLEY	1. 3000C
CYLINDER BLOCK	1. 1000
CYLINDER HEAD	1. 2000

## D

DEFLECTOR, ROTOR ASSY. SHAFT OIL	3. 5029
DIPSTICK	4. 6000A
DIPSTICK	4. 6001
DISC ASSY., CLUTCH	8. 1020

## E

ELBOW, BREATHER	4. 8013
ELBOW, CYLINDER HEAD FRESH WATER OUTLET	5. 3443
ELBOW, OIL COOLER WATER OUTLET	4. 4220
ELBOW, TURBOCHARGER AIR INLET	3. 1259
ELBOW, TURBOCHARGER AIR OUTLET	3. 5417
EXTENSION, BREATHER TUBE	4. 8010
EYE, THROTTLE BOOSTER ADJUSTING	2. 7982

## F

FACING, CLUTCH	8. 1030
FAN, GENERATOR	7. 1440
FILTER ASSY., FUEL	2. 3310
FILTER ASSY., OIL	4. 2240
FILTER UNIT, BREATHER	4. 8060
FLANGE, PROPELLER DRIVE	9. 1430
FLYWHEEL	1. 4000A
FLYWHEEL ASSY.	1. 4001
FLYWHEEL HOUSING	1. 5000A
FOLLOWER ASSY., CAM	1. 8260
FOLLOWER, INJECTOR	2. 1060
FORK, GOVERNOR OPERATING SHAFT-LOWER	2. 7290
FUEL FILTER AND STRAINER	2. 3000A
FUEL PUMP	2. 2000

## G

GASKET KIT, CYLINDER HEAD OVERHAUL	1. 2002
GASKET KIT, ENGINE OVERHAUL	1. 1002
GASKET, AIR CLEANER MOUNTING ADAPTOR	3. 1087
GASKET, AIR INLET HOUSING	3. 3010
GASKET, CLUTCH HOUSING INSPECTION HOLE COVER	8. 1070
GASKET, COVERING VARIABLE SPEED SPRING HOUSING COVER	2. 7693
GASKET, CRANKSHAFT FRONT COVER	1. 3170
GASKET, CYLINDER BLOCK VALLEY COVER	1. 1057
GASKET, CYLINDER HEAD COMPRESSION	1. 2010
GASKET, CYLINDER HEAD GOVERNOR HOLE COVER	1. 2060
GASKET, CYLINDER HEAD WATER HOLE COVER	1. 2044
GASKET, ELBOW FRESH WATER OUTLET	5. 3444
GASKET, EXHAUST MANIFOLD	6. 1010
GASKET, FLYWHEEL HOUSING	1. 5010
GASKET, FRESH WATER PUMP	5. 1010
GASKET, FRESH WATER PUMP BODY COVER	5. 1032
GASKET, FUEL PUMP TO ENGINE	2. 2007
GASKET, FUEL PUMP VALVE PLUG	2. 2180

## PART NAME

## GROUP NO.

## G

GASKET, GOVERNOR COVER	2. 7051
GASKET, GOVERNOR HIGH SPEED SPRING COVER	2. 7650
GASKET, GOVERNOR TO CYLINDER BLOCK	2. 6502
GASKET, GOVERNOR TO CYLINDER BLOCK	2. 7008
GASKET, GOVERNOR WEIGHT HOUSING COVER	2. 7530
GASKET, HEAT EXCHANGER COVER	5. 5050
GASKET, OIL COOLER ADAPTOR TO BLOCK	4. 4115
GASKET, OIL COOLER BYPASS VALVE PLUG	4. 4170
GASKET, OIL COOLER CORE-INNER	4. 4030
GASKET, OIL COOLER CORE-OUTER	4. 4040
GASKET, OIL FILTER BYPASS PLUG	4. 2489
GASKET, OIL PAN DRAIN PLUG	4. 7090
GASKET, OIL PAN TO BLOCK	4. 7030
GASKET, OIL PRESSURE REGULATOR PLUG	4. 1720
GASKET, OIL PUMP INLET PIPE	4. 1520
GASKET, RAW WATER PUMP COVER	5. 6100
GASKET, ROCKER COVER	1. 8455
GASKET, STARTING MOTOR	7. 3004
GASKET, THERMOSTAT HOUSING	5. 2110
GASKET, TURBOCHARGER AIR OUTLET ELBOW	3. 5418
GASKET, TURBOCHARGER EXHAUST INLET CONNECTION	3. 5307
GASKET, TURBOCHARGER OIL RETURN COVER	3. 5504
GEAR ASSY., HYDRAULIC MARINE	9. 1001
GEAR, CAMSHAFT AND BALANCE SHAFT	1. 7200
GEAR, CRANKSHAFT TIMING	1. 3145
GEAR, FLYWHEEL RING	1. 4010
GEAR, FUEL PUMP DRIVE	2. 2087
GEAR, GOVERNOR DRIVE	2. 7960
GEAR, INJECTOR	2. 1180
GEAR, OIL PUMP DRIVE-ON PUMP	4. 1380
GENERATOR ASSY.	7. 1001
GOVERNOR ASSY.	2. 6501
GOVERNOR ASSY.	2. 7001
GUIDE, CAM FOLLOWER	1. 8300
GUIDE, EXHAUST VALVE	1. 8320
GUIDE, GOVERNOR VARIABLE SPEED SPRING PLUNGER	2. 7780

## H

HANGER, THROTTLE BOOSTER SPRING	2. 7985
HEAD ASSY., CYLINDER	1. 2001
HOSE, AIR INLET PIPE	3. 1270
HOSE, CLUTCH RELEASE BEARING	8. 1320
HOSE, EXHAUST MANIFOLD FRESH WATER INLET	5. 3432
HOSE, FRESH WATER OUTLET	5. 3446
HOSE, FUEL PUMP TO JUNCTION BLOCK	2. 5144
HOSE, HEAT EXCHANGER FRESH WATER INLET	5. 3295
HOSE, HEAT EXCHANGER OUTLET CONNECTION TO WATER PUMP	5. 3334
HOSE, HEAT EXCHANGER RAW WATER INLET TUBE	5. 5470
HOSE, OIL COOLER WATER INLET	4. 4213
HOSE, OIL COOLER WATER INLET CONNECTION	5. 3365
HOSE, OIL COOLER WATER OUTLET	4. 4240
HOSE, OIL COOLER WATER OUTLET	5. 3422
HOSE, TURBO TO AIR SILENCER	3. 2017
HOSE, TURBOCHARGER AIR INLET CONNECTION	3. 5424
HOSE, TURBOCHARGER AIR OUTLET CONNECTION	3. 5420
HOUSING ASSY., AIR INLET	3. 3001
HOUSING ASSY., FLYWHEEL	1. 5001
HOUSING ASSY., GOVERNOR CONTROL	2. 7230
HOUSING ASSY., GOVERNOR VARIABLE SPEED SPRING	2. 7680
HOUSING ASSY., TURBOCHARGER INTERMEDIATE	3. 5018



## ALPHABETICAL INDEX

PART NAME	GROUP NO.	PART NAME	GROUP NO.
<b>H</b>		<b>N</b>	
HOUSING, CLUTCH	8. 1010	NAME PLATE, GOVERNOR	2. 7002
HOUSING, GOVERNOR CONTROL	2. 7235	NUT, CLUTCH ADJUSTING	8. 1144
HOUSING, GOVERNOR HIGH SPEED SPRING		NUT, INJECTOR VALVE	2. 1030
ADJUSTING SCREW	2. 7635		
HOUSING, GOVERNOR VARIABLE SPEED SPRING	2. 7690	<b>O</b>	
HOUSING, OIL COOLER-ENGINE	4. 4050	OIL COOLER	4. 4000A
HOUSING, THERMOSTAT	5. 2090	OIL DISTRIBUTION SYSTEM	4. 1000B
HOUSING, TURBOCHARGER COMPRESSOR	3. 5022	OIL FILLER	4. 5000A
HOUSING, TURBOCHARGER TURBINE	3. 5003	OIL PAN	4. 7000A
HUB, FRESH WATER PUMP DRIVEN PULLEY	5. 1216	OIL PRESSURE REGULATOR	4. 1000C
		OIL PUMP	4. 1000A
<b>I</b>		OVERHAUL KIT, FUEL PUMP	2. 2004
IMPELLER, FRESH WATER PUMP	5. 1110		
IMPELLER, RAW WATER PUMP	5. 6230	<b>P</b>	
INJECTOR	2. 1000A	PACKING, GOVERNOR VARIABLE SPEED SPRING	
INJECTOR ASSY.	2. 1001	LEVER SHAFT	2. 7750
INJECTOR CONTROLS	2. 9000	PAINT, ENGINE TOUCH-UP	12. 8001
INSTALLTION KIT, BREATHER	4. 8046	PAN, OIL	4. 7001
		PIN, GOVERNOR DIFFERENTIAL LEVER	2. 7315
<b>K</b>		PIN, GOVERNOR OPERATING SHAFT LEVER	2. 7300
KIT, GOVERNOR CONVERSION	2. 7012	PIN, GOVERNOR WEIGHT	2. 7430
KIT, GOVERNOR INSTALLATION	2. 6507	PIN, INJECTOR FOLLOWER	2. 1090
KITS, SERVICE (ALL)	12. 8715	PIN, INJECTOR STOP	2. 1100
		PIN, PISTON	1. 6140
<b>L</b>		PIPE ASSY., BREATHER	4. 8001
LABEL, TIMING INJECTOR	2. 1005	PIPE, EXHAUST	6. 2090
LEAD, JUMPER TO SHUTDOWN SOLENOID	2. 6630	PIPE, OIL PUMP INLET	4. 1510
LEVER AND PIN ASSY., GOVERNOR DIFFERENTIAL	2. 7310	PISTON ASSY.	1. 6110
LEVER ASSY., ACTUATOR	2. 6515	PLATE, CAM AND BALANCE SHAFT THRUST	1. 7070
LEVER ASSY., GOVERNOR CONTROL LINK		PLATE, CLUTCH ADJUSTING NUT WEAR	8. 1146
HOUSING OPERATING	2. 7902	PLATE, CLUTCH PRESSURE	8. 1080
LEVER, CLUTCH HAND CONTROL	8. 1470	PLATE, FLYWHEEL FLEXIBLE COUPLING	1. 4085
LEVER, CLUTCH RELEASE YOKE	8. 1142	PLATE, OPTION AND ACCESSORY NAME	1. 8500
LEVER, GOVERNOR CONTROL	2. 9410	PLUG, EEC GOVERNOR CAVITY	2. 6660
LEVER, GOVERNOR OPERATING SHAFT-UPPER	2. 7280	PLUG, FUEL PUMP VALVE	2. 2170
LEVER, GOVERNOR THROTTLE SHAFT	2. 7105	PLUG, OIL COOLER BYPASS VALVE	4. 4160
LEVER, GOVERNOR THROTTLE STOP	2. 7106	PLUG, OIL FILTER BYPASS VALVE	4. 2488
LEVER, GOVERNOR VARIABLE SPEED SPRING	2. 7730	PLUG, OIL PAN DRAIN	4. 7080
LEVER, INJECTOR CONTROL TUBE	2. 9009	PLUG, OIL PRESSURE RELIEF	4. 1715
LEVER, INJECTOR CONTROL TUBE RACK	2. 9014	PLUNGER AND BUSHING ASSY., INJECTOR	2. 1160
LEVER, THROTTLE BOOSTER SPRING	2. 7977	PLUNGER, GOVERNOR LOW SPEED SPRING	2. 7560
LINER, CYLINDER	1. 1037	PLUNGER, GOVERNOR VARIABLE SPEED SPRING	2. 7770
LINK, ACTUATOR OPERATING CONNECTION	2. 6620	POWER TAKEOFF ASSY.	8. 1001
LINK, CLUTCH RELEASE YOKE	8. 1315	PULLEY, AIR COMPRESSOR	12. 4015
LINK, GOVERNOR OPERATING LEVER		PULLEY, BELT GUIDE	12. 4027
CONNECTING	2. 7312	PULLEY, CRANKSHAFT	1. 3280
LOCK, CLUTCH ADJUSTING NUT	8. 1145	PULLEY, FRESH WATER PUMP	5. 1214
LOCK, CLUTCH DRIVE SHAFT BEARING RETAINER	8. 1700	PULLEY, GENERATOR	7. 1500
LOCK, EXHAUST VALVE SPRING	1. 8370	PULLEY, HYDRAULIC PUMP DRIVE	12. 5007
LOCKNUT, GOVERNOR HIGH SPEED SPRING		PULLEY, RAW WATER PUMP DRIVE	5. 6400
RETAINER	2. 7615	PUMP ASSY., FRESH WATER	5. 1001
LUBE OIL FILTER	4. 2000A	PUMP ASSY., FUEL	2. 2001
LUBRICATING COMPOUND THREAD	12. 8110	PUMP ASSY., HYDRAULIC	12. 5001
		PUMP ASSY., RAW WATER	5. 6001
<b>M</b>		<b>R</b>	
MANIFOLD, EXHAUST	6. 1001	RACK ASSY., INJECTOR	2. 1170
MECHANICAL GOVERNOR	2. 7000A	RECONDITIONING KIT, FRESH WATER PUMP	5. 1002
MISCELLANEOUS SERVICE PARTS - SECTION 1	12. 8801	RECONDITIONING KIT, RAW WATER PUMP	5. 6025
MISCELLANEOUS SERVICE PARTS - SECTION 2	12. 8802	REGULATOR, BREATHER PIPE	4. 8003
MISCELLANEOUS SERVICE PARTS - SECTION 5	12. 8805	REPLACEMENT KIT, RAW WATER PUMP SEAL	
MISCELLANEOUS SERVICE PARTS - SECTION 7	12. 8807	AND IMPELLER	5. 6220
MISCELLANEOUS SERVICE PARTS-SECTION 4	12. 8804	RETAINER, CLUTCH DRIVE SHAFT BEARING	8. 1690
MOTOR ASSY., STARTING	7. 3001	RETAINER, CRANKSHAFT PULLEY	1. 3290
MOUNTING, ENGINE FRONT SUPPORT ELASTIC	11. 1072	RETAINER, GOVERNOR HIGH SPEED SPRING	2. 7610

## ALPHABETICAL INDEX

PART NAME	GROUP NO.	PART NAME	GROUP NO.
<b>R</b>		<b>S</b>	
RETAINER, GOVERNOR VARIABLE SPEED SPRING	2. 7790	SPACER, FAN BLADE	5. 4011
RETAINER, PISTON PIN	1. 6150	SPACER, GENERATOR ADJUSTING STRAP	7. 1581
RING SET, PISTON	1. 6115	SPACER, TURBOCHARGER ROTOR THRUST	3. 5035
RING, CLUTCH DRIVING	8. 1018	SPRING, CLUTCH PRESSURE PLATE RETURN	8. 1135
RING, GOVERNOR WEIGHT SHAFT END BEARING		SPRING, CLUTCH TOGGLE LEVER	8. 1100
SNAP	2. 7480	SPRING, EXHAUST VALVE	1. 8340
RING, INJECTOR HOLE TUBE SEAL	1. 2046	SPRING, FUEL PUMP VALVE RETAINING	2. 2160
RING, RAW WATER PUMP BEARING RETAINER	5. 6140	SPRING, GOVERNOR HIGH SPEED	2. 7550
RISER, GOVERNOR	2. 7380	SPRING, GOVERNOR LOW SPEED	2. 7540
ROCKER COVER	1. 8000A	SPRING, GOVERNOR VARIABLE SPEED	2. 7760
ROD, GOVERNOR CONNECTING	2. 7905	SPRING, GOVERNOR YIELD LINK	2. 7302
ROD, PUSH	1. 8180	SPRING, INJECTOR CONTROL TUBE	2. 9012
ROLLER SET, CAM FOLLOWER	1. 8265	SPRING, INJECTOR CONTROL TUBE THROTTLE	2. 9011
ROTATOR, VALVE	1. 8365	SPRING, INJECTOR PLUNGER	2. 1080
ROTOR, FUEL PUMP	2. 2090	SPRING, INJECTOR VALVE	2. 1250
<b>S</b>		SPRING, OIL COOLER BYPASS VALVE	4. 4150
SCREW ASSY., GOVERNOR BUFFER	2. 7810	SPRING, OIL FILTER BYPASS VALVE	4. 2486
SCREW, GOVERNOR LOW SPEED SPRING		SPRING, OIL PRESSURE REGULATOR	4. 1690
ADJUSTING	2. 7590	SPRING, PUSH ROD	1. 8190
SCREW, ROCKER ARM ADJUSTING	1. 8135	SPRING, THROTTLE BOOSTER	2. 7980
SEAL, BREATHER PIPE	4. 8002	STOP, GOVERNOR VARIABLE SPEED SPRING	
SEAL, BREATHER SHELL	4. 8059	RETAINER	2. 7795
SEAL, CRANKSHAFT OIL-FRONT	1. 3040	STRAINER ASSY., FUEL	2. 3001
SEAL, CRANKSHAFT OIL-REAR	1. 3060	STRAP, AIR COMPRESSOR MOUNTING BRACKET	
SEAL, EEC GOVERNOR WIRE	2. 6650	ADJUSTING	12. 4011
SEAL, FRESH WATER PUMP	5. 1130	STRAP, GENERATOR ADJUSTING	7. 1580
SEAL, FRESH WATER PUMP SHAFT BEARING	5. 1065	SUPPORT, ENGINE FRONT	11. 1070
SEAL, FUEL PUMP OIL	2. 2070	SUPPORT, ENGINE REAR	11. 1100
SEAL, RAW WATER PUMP BEARING	5. 6160	<b>T</b>	
SEAL, RAW WATER PUMP SHAFT	5. 6170	TANK, EXPANSION	5. 5001
SEAL, ROTOR ASSY. SHAFT OIL	3. 5028	TERMINAL, EEC GOVERNOR MALE	2. 6645
SEALANT, RTV	12. 8255	THERMOSTAT	5. 2000B
SEAT, GOVERNOR LOW SPEED SPRING	2. 7570	THERMOSTAT ASSY.	5. 2050
SEAT, INJECTOR VALVE SPRING	2. 1255	TIP ASSY., INJECTOR SPRAY	2. 1235
SERVICE KIT, INJECTOR	2. 1002	TUBE, AIR COMPRESSOR LUBE OIL DRAIN	12. 4070
SETS, SERVICE (ALL)	12. 8720	TUBE, AIR COMPRESSOR LUBE OIL SUPPLY	12. 4065
SHAFT ASSY., FRESH WATER PUMP	5. 1050	TUBE, AIR COMPRESSOR WATER INLET	12. 4085
SHAFT ASSY., GOVERNOR OPERATING	2. 7250	TUBE, AIR COMPRESSOR WATER OUTLET	12. 4090
SHAFT ASSY., GOVERNOR SHUTDOWN	2. 7115	TUBE, CYLINDER HEAD GOVERNOR CONTROL	
SHAFT ASSY., GOVERNOR THROTTLE	2. 7095	LINK	2. 6640
SHAFT ASSY., ROCKER	1. 8160	TUBE, CYLINDER HEAD GOVERNOR CONTROL	
SHAFT ASSY., TURBOCHARGER ROTOR	3. 5033	LINK	2. 7832
SHAFT, CLUTCH DRIVE	8. 1670	TUBE, EXHAUST MANIFOLD FRESH WATER INLET	5. 3433
SHAFT, CLUTCH RELEASE	8. 1270	TUBE, FILTER TO CYLINDER HEAD	2. 5149
SHAFT, FUEL PUMP DRIVE	2. 2093	TUBE, FUEL PUMP TO FILTER	2. 5100
SHAFT, FUEL PUMP DRIVEN	2. 2089	TUBE, FUEL SUPPLY CROSSOVER	2. 5163
SHAFT, GOVERNOR OPERATING	2. 7255	TUBE, HEAT EXCHANGER DEARATION	5. 5335
SHAFT, GOVERNOR VARIABLE SPEED SPRING		TUBE, INJECTOR HOLE	1. 2045
LEVER	2. 7720	TUBE, JUNCTION BLOCK TO CYLINDER HEAD	2. 5175
SHAFT, GOVERNOR WEIGHT CARRIER	2. 7360	TUBE, OIL COOLER INLET AND OUTLET OIL	4. 4190
SHAFT, GOVERNOR YIELD	2. 7301	TUBE, OIL COOLER WATER OUTLET	4. 4270
SHAFT, INJECTOR CONTROL-MAIN	2. 9006	TUBE, OIL FILTER INLET	4. 3001
SHAFT, RAW WATER PUMP	5. 6120	TUBE, OIL FILTER OUTLET	4. 3020
SHELL, BREATHER	4. 8055	TUBE, TURBOCHARGER OIL RETURN	3. 5505
SHELL, CONNECTING ROD BEARING	1. 6100	TUBE, TURBOCHARGER OIL SUPPLY	3. 5500
SHELL, CRANKSHAFT MAIN BEARING	1. 3090	TUBE, TURBOCHARGER WATER RETURN	5. 3269
SHIELD, EXHAUST PORT	1. 2048	TURBOCHARGER	3. 5001
SHIM, GOVERNOR VARIABLE SPEED SPRING	2. 7800	<b>V</b>	
SILENCER, AIR	3. 2001	VALVE ASSY., FUEL PUMP	2. 2130
SLEEVE, CLUTCH RELEASE	8. 1285	VALVE KIT, INJECTOR	2. 1238
SLEEVE, CRANKSHAFT REAR OIL SEAL	1. 3066	VALVE MECHANISM	1. 8000
SLEEVE, VALVE GUIDE	1. 8325	VALVE, EXHAUST	1. 8310
SOLENOID, AIR SHUTOFF OR GOVERNOR	7. 4519	VALVE, INJECTOR CHECK	2. 1200
SPACER, CLUTCH DRIVE SHAFT BEARING			
RETAINER	8. 1695		

## ALPHABETICAL INDEX

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## GROUP NO.

## V

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VALVE, OIL COOLER BYPASS .....	4. 4140
VALVE, OIL FILTER BYPASS .....	4. 2485
VALVE, OIL PRESSURE REGULATOR .....	4. 1700
VENTILATION SYSTEM .....	4. 8000A

## W

WASHER, GOVERNOR THROTTLE SHAFT .....	2. 7140
WATER PUMP .....	5. 1000
WEIGHT, GOVERNOR HIGH SPEED .....	2. 7410
WEIGHT, GOVERNOR LOW SPEED .....	2. 7420
WHEEL, TURBOCHARGER COMPRESSOR .....	3. 5036
WIRE ASSY., GENERATOR TO REGULATOR .....	7. 1630

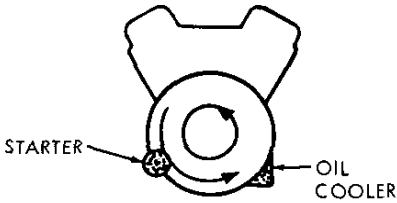
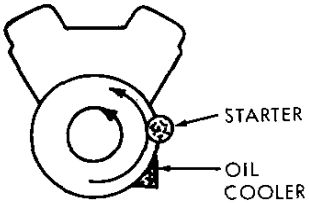
## Y

YOKE, CLUTCH RELEASE .....	8. 1275
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# MODEL INDEXES

## MODEL DESCRIPTION CHART

4 0 8 7 - 7 1 0 0

8.2 SERIES	NUMBER OF CYLINDERS	APPLICATION DESIGNATION (SEE BELOW)	BASIC ENGINE ARRANGEMENTS (SEE BELOW)	DESIGN VARIATION (SEE BELOW)	SPECIFIC MODEL NUMBER
<div> <p><u>APPLICATION DESIGNATION</u></p> <p>4082-8300 Marine  4083-7300 Fan to F/W - Industrial  4087-7300 Fan to F/W - Vehicle</p> </div> <div> <p><u>DESIGN VARIATION</u></p> <p>4087 - 7100 N/A Engine  4087 - 7300 Turbocharged</p> </div> <div> <p><u>BASIC ENGINE ARRANGEMENTS:</u></p> <p>Rotation: R (right) designates rotation viewed from the <u>front</u> of the engine</p> <p>Type: C-D designates location of starter and oil cooler as viewed from the <u>rear</u> (flywheel) end.</p> <p>Cylinder Bank: Left and right cylinder banks are determined from <u>rear</u> of engine.</p> </div> <div>  <p>STARTER</p> <p>OIL COOLER</p> <p>RC(XXXX-7XXX)</p> </div> <div>  <p>STARTER</p> <p>OIL COOLER</p> <p>RD(XXXX-8XXX)</p> </div>					

19345

CHART	8V MODELS 4083-7312 THRU 4087-7334
4082-8300	8V MARINE STBD UNIT TURBOCHARGED
4082-8301	8V MARINE PORT UNIT TURBOCHARGED
4083-7100	8V INDUSTRIAL 4-CYCLE
4083-7300	8V INDUSTRIAL 4-CYCLE TURBOCHARGED
4084-7112	8V POWER BASE STAND-BY FIREPUMP
4084-7312	8V POWER BASE STAND-BY FIREPUMP TURBOCHARGED
4087-7100	8V TRUCK 4-CYCLE
4087-7130	8V TRUCK 4-CYCLE 130 H.P.
4087-7145	8V TRUCK 4-CYCLE 130 H.P.
4087-7182	8V TRUCK 4 CYCLE TAIWAN
4087-7300	8V TRUCK 4-CYCLE TURBOCHARGED
4087-7336	8V TRUCK 4 CYCLE TURBOCHARGED
4087-7340	8V TRASIT COACH 4 CYCLE TURBOCHARGED
4087-7355	8V TRUCK 2600 RPM 4 CYCLE TURBOCHARGED

GROUP NAME	GROUP NO.	TYPE NO.					
		MODEL					
		4083-7312	4083-7314				
Cylinder Block	1.1000	183	183				
Cylinder Head	1.2000	214	214				
Engine Lifter Bracket	1.2000A	214	214				
Crankshaft	1.3000	74	74				
Crankshaft Front Cover	1.3000A	133	133				
Crankshaft Pulley	1.3000C	370	370				
Flywheel	1.4000A	964	968				
Flywheel Housing	1.5000A	597	598				
Connecting Rod and Piston	1.6000	189	189				
Camshaft and Gear Train	1.7000	241	241				
Valve Operating Mechanism	1.8000	155	155				
Rocker Cover	1.8000A	455	455				
Fuel Injector	2.1000A	174	174				
Fuel Pump	2.2000	187	187				
Fuel Filter	2.3000A	684	684				
Fuel Lines	2.5000A	1548	1548				
Governor, Mechanical	2.7000A	1601	1601				
Injector Controls	2.9000	297	297				
Air Cleaner	3.1000A	365	365				
Air Inlet Housing	3.3000A	626	626				
Turbocharger	3.5000A	443	443				
Oil Pump	4.1000A	151	151				
Oil Distribution System	4.1000B	455	455				
Oil Pressure Regulator	4.1000C	25	25				
Oil Filter	4.2000A	347	347				
Oil Cooler	4.4000A	868	868				
Oil Filler	4.5000A	140	140				
Dipstick	4.6000A	946+	946+				
Oil Pan	4.7000A	679	679				
Ventilating System	4.8000A	808	808				
Fresh Water Pump	5.1000	210	210				
Thermostat	5.2000B	292	292				
Water Connections	5.3000B	361	361				
Exhaust Manifold	6.1000A	516	516				
Starting Motor	7.3000A	311	311				
Shut-Off	7.4000C	1014	1014				
Engine Mounts	11.1000A	647	647				

+ Thru 8G21146 & Eff. w/8G21147 use Type 947

GROUP NAME	GROUP NO.	TYPE NO.					
		MODEL					
		4087-7101	4087-7102	4087-7103	4087-7104	4087-7105	4087-7106
Cylinder Block	1.1000	183	183	183	183	183	183
Cylinder Head	1.2000	153	153	153	153	153	153
Engine Lifter Bracket	1.2000A	214	214	214	214	214	214
Crankshaft	1.3000	74	74	74	74	74	74
Crankshaft Front Cover	1.3000A	133	133	133	133	133	133
Crankshaft Pulley	1.3000C	370	370	370	370	370	370
Flywheel	1.4000A	964	967	964	967	964	967
Flywheel Housing	1.5000A	597	598	597	598	597	598
Connecting Rod and Piston	1.6000	188	188	188	188	188	188
Camshaft and Gear Train	1.7000	240	240	240	240	240	240
Valve Operating Mechanism	1.8000	155	155	155	155	155	155
Rocker Cover	1.8000A	455	455	455	455	455	455
Fuel Injector	2.1000A	173	173	173	173	173	173
Fuel Pump	2.2000	187	187	187	187	187	187
Fuel Filter	2.3000A	684	684	684	684	684	684
Fuel Lines	2.5000A	1548	1548	1548	1548	1548	1548
Governor, Mechanical	2.7000A	1601	1601	1601	1601	1601	1601
Injector Controls	2.9000	297	297	297	297	297	297
Air Cleaner	3.1000A	366	366	366	366	366	366
Air Inlet Housing	3.3000A	626	626	626	626	626	626
Oil Pump	4.1000A	151	151	151	151	151	151
Oil Distribution System	4.1000B	455	455	455	455	455	455
Oil Pressure Regulator	4.1000C	25	25	25	25	25	25
Oil Filter	4.2000A	347	347	347	347	347	347
Oil Cooler	4.4000A	868	868	868	868	868	868
Oil Filler	4.5000A	140	140	140	140	140	140
Dipstick	4.6000A	947	947	946*	946*	947	947
Oil Pan	4.7000A	679	679	679	679	679	679
Ventilating System	4.8000A	807	807	808	808	807	807
Fresh Water Pump	5.1000	212	212	210	210	212	212
Thermostat	5.2000B	292	292	292	292	292	292
Water Connections	5.3000B	361	361	361	361	361	361
Exhaust Manifold	6.1000A	517	517	515	515	517	517
Starting Motor	7.3000A	NONE	NONE	NONE	NONE	NONE	NONE
Shut-Off	7.4000C	1014	1014	1014	1014	1014	1014
Engine Mounts	11.1000A	647#	647#	647	647	647#	647#

\*Thru 8G13522 & Eff. W/8G13523 use Type 947

# Thru 8G15934 & Eff. W/8G15935 use Type 656



GROUP NAME	GROUP NO.	TYPE NO.					
		MODEL					
		4087-7107	4087-7108	4087-7109	4087-7110	4087-7111	4087-7112
Cylinder Block	1.1000	183	183	183	183	183	183
Cylinder Head	1.2000	153	153	153	153	153	153
Engine Lifter Bracket	1.2000A	214	214	214	214	214	214
Crankshaft	1.3000	74	74	74	74	74	74
Crankshaft Front Cover	1.3000A	133	133	133	133	133	133
Crankshaft Pulley	1.3000C	370	370	370	370	370	370
Flywheel	1.4000A	964	967	968	968	967	964
Flywheel Housing	1.5000A	597	598	597	597	598	597
Connecting Rod and Piston	1.6000	188	188	188	188	188	188
Camshaft and Gear Train	1.7000	240	240	240	240	240	240
Valve Operating Mechanism	1.8000	155	155	155	155	155	155
Rocker Cover	1.8000A	455	455	455	455	455	455
Fuel Injector	2.1000A	173	173	173	173	173	173
Fuel Pump	2.2000	187	187	187	187	187	187
Fuel Filter	2.3000A	684	684	684	684	684	684
Fuel Lines	2.5000A	1548	1548	1548	1548	1548	1548
Governor, Mechanical	2.7000A	1601	1601	1601	1601	1601	1601
Injector Controls	2.9000	297	297	297	297	297	297
Air Cleaner	3.1000A	366	366	366	366	366	366
Air Inlet Housing	3.3000A	626	626	626	626	626	626
Oil Pump	4.1000A	151	151	151	151	151	151
Oil Distribution System	4.1000B	455	455	455	455	455	455
Oil Pressure Regulator	4.1000C	25	25	25	25	25	25
Oil Filter	4.2000A	347	347	347	347	347	347
Oil Cooler	4.4000A	868	868	868	868	868	868
Oil Filler	4.5000A	140	140	140	140	140	140
Dipstick	4.6000A	946*	946*	946*	946*	947	947
Oil Pan	4.7000A	679	679	679	679	679	679
Ventilating System	4.8000A	808	808	808	808	808	807
Fresh Water Pump	5.1000	210	210	210	210	210	212
Thermostat	5.2000B	292	292	292	292	292	292
Water Connections	5.3000B	361	361	361	361	361	361
Exhaust Manifold	6.1000A	515	515	515	515	517	517
Starting Motor	7.3000A	NONE	NONE	NONE	NONE	311	311
Shut-Off	7.4000C	1014	1014	1014	1014	1014	1014
Engine Mounts	11.1000A	647	647	647	647	647	647

\*Thru 8G13522 & Eff. W/8G13523 use Type 947

GROUP NAME	GROUP NO.	TYPE NO.					
		MODEL					
		4087-7113	4087-7114	4087-7115	4087-7116	4087-7117	4087-7118
Cylinder Block	1.1000	183	183	183	183	183	183
Cylinder Head	1.2000	153	153	153	153	153	153
Engine Lifter Bracket	1.2000A	214	214	214	214	214	214
Crankshaft	1.3000	74	74	74	74	74	74
Crankshaft Front Cover	1.3000A	133	133	133	133	133	133
Crankshaft Pulley	1.3000C	370	370	370	370	370	370
Flywheel	1.4000A	967	964	967	968	964	967
Flywheel Housing	1.5000A	598	597	598	597	597	598
Connecting Rod and Piston	1.6000	188	188	188	188	188	188
Camshaft and Gear Train	1.7000	240	240	240	240	240	240
Valve Operating Mechanism	1.8000	155	155	155	155	155	155
Rocker Cover	1.8000A	455	455	455	455	455	455
Fuel Injector	2.1000A	173	173	173	173	173	173
Fuel Pump	2.2000	187	187	187	187	187	187
Fuel Filter	2.3000A	684	684	684	684	684	684
Fuel Lines	2.5000A	1548	1548	1548	1548	1548	1548
Governor, Mechanical	2.7000A	1601	1601	1601	1601	1601=	1601=
Injector Controls	2.9000	297	297	297	297	297	297
Air Cleaner	3.1000A	366	366	366	366	366	366
Air Inlet Housing	3.3000A	626	626	626	626	626	626
Oil Pump	4.1000A	151	151	151	151	151	151
Oil Distribution System	4.1000B	455	455	455	455	455	455
Oil Pressure Regulator	4.1000C	25	25	25	25	25	25
Oil Filter	4.2000A	347	347	347	347	347	347
Oil Cooler	4.4000A	868	868	868	868	868	868
Oil Filler	4.5000A	140	140	140	140	140	140
Dipstick	4.6000A	947	946+	946+	946+	947	947
Oil Pan	4.7000A	679	679	679	679	679	679
Ventilating System	4.8000A	807	778	808	808	807	807
Fresh Water Pump	5.1000	212	210	210	210	212	212
Thermostat	5.2000B	292	292	292	292	292	292
Water Connections	5.3000B	361	361	361	361	361	361
Exhaust Manifold	6.1000A	517	515	515	515	517	517
Starting Motor	7.3000A	311	311	311	311	NONE	NONE
Shut-Off	7.4000C	1014	1014	1014	1014	1014	1014
Engine Mounts	11.1000A	647	647	647	647	647#	647#

= Thru 8G26798 & Eff. W/8G26799 use Type 1731

+ Thru 8G21146 & Eff. W/8G21147 use Type 947

# Thru 8G15934 & Eff. W/8G15935 use Type 656

GROUP NAME	GROUP NO.	TYPE NO.					
		MODEL					
		4087-7119	4087-7120	4087-7121	4087-7122	4087-7123	
Cylinder Block	1.1000	183	183	183	183	183	
Cylinder Head	1.2000	153	153	153	153	153	
Engine Lifter Bracket	1.2000A	214	214	214	214	214	
Crankshaft	1.3000	74	74	74	74	74	
Crankshaft Front Cover	1.3000A	133	133	133	133	133	
Crankshaft Pulley	1.3000C	370	370	370	370	370	
Flywheel	1.4000A	964	967	968	968	968	
Flywheel Housing	1.5000A	597	598	597	597	597	
Connecting Rod and Piston	1.6000	188	188	188	188	188	
Camshaft and Gear Train	1.7000	240	240	240	240	240	
Valve Operating Mechanism	1.8000	155	155	155	155	155	
Rocker Cover	1.8000A	455	455	455	455	455	
Fuel Injector	2.1000A	173	173	173	173	173	
Fuel Pump	2.2000	187	187	187	187	187	
Fuel Filter	2.3000A	684	684	684	684	684	
Fuel Lines	2.5000A	1548	1548	1548	1548	1548	
Governor, Mechanical	2.7000A	1601=	1601=	1601=	1601	1601	
Injector Controls	2.9000	297	297	297	297	297	
Air Cleaner	3.1000A	366	366	366	366	366	
Air Inlet Housing	3.3000A	626	626	626	626	626	
Oil Pump	4.1000A	151	151	151	151	151	
Oil Distribution System	4.1000B	455	455	455	455	455	
Oil Pressure Regulator	4.1000C	25	25	25	25	25	
Oil Filter	4.2000A	347	347	347	347	347	
Oil Cooler	4.4000A	868	868	868	868	868	
Oil Filler	4.5000A	140	140	140	140	140	
Dipstick	4.6000A	946*	946*	946*	947	947	
Oil Pan	4.7000A	679	679	679	679	679	
Ventilating System	4.8000A	808	808	808	807	807	
Fresh Water Pump	5.1000	210	210	210	212	212	
Thermostat	5.2000B	292	292	292	292	292	
Water Connections	5.3000B	361	361	361	361	361	
Exhaust Manifold	6.1000A	515	515	515	517	517	
Starting Motor	7.3000A	NONE	NONE	NONE	NONE	NONE	
Shut-Off	7.4000C	1014	1014	1014	1014	1014	
Engine Mounts	11.1000A	647	647	647	647#	647#	

\* Thru 8G13522 & Eff. W/8G13523 use Type 947

= Thru 8G26798 & Eff. W/8G26799 use Type 1731

# Thru 8G15934 & Eff. W/8G15935 use Type 656

GROUP NAME	GROUP NO.	TYPE NO.					
		MODEL					
		4087-7301	4087-7302	4087-7303	4087-7304	4087-7305	4087-7306
Cylinder Block	1.1000	183	183	183	183	183	183
Cylinder Head	1.2000	214	214	214	214	214	214
Engine Lifter Bracket	1.2000A	214	214	214	214	214	214
Crankshaft	1.3000	74	74	74	74	74	74
Crankshaft Front Cover	1.3000A	133	133	133	133	133	133
Crankshaft Pulley	1.3000C	370	370	370	370	370	370
Flywheel	1.4000A	964	967	968	964	967	968
Flywheel Housing	1.5000A	597	598	597	597	598	597
Connecting Rod and Piston	1.6000	189	189	189	189	189	189
Camshaft and Gear Train	1.7000	241	241	241	241	241	241
Valve Operating Mechanism	1.8000	155	155	155	155	155	155
Rocker Cover	1.8000A	455	455	455	455	455	455
Fuel Injector	2.1000A	174	174	174	174	174	174
Fuel Pump	2.2000	187	187	187	187	187	187
Fuel Filter	2.3000A	684	684	684	684	684	684
Fuel Lines	2.5000A	1548	1548	1548	1548	1548	1548
Governor, Mechanical	2.7000A	1601	1601	1601	1601	1601	1601
Injector Controls	2.9000	297	297	297	297	297	297
Air Cleaner	3.1000A	365	365	365	365	365	365
Air Inlet Housing	3.3000A	626	626	626	626	626	626
Turbocharger	3.5000A	443	443	443	443	443	443
Oil Pump	4.1000A	151	151	151	151	151	151
Oil Distribution System	4.1000B	455	455	455	455	455	455
Oil Pressure Regulator	4.1000C	25	25	25	25	25	25
Oil Filter	4.2000A	347	347	347	347	347	347
Oil Cooler	4.4000A	868	868	868	868	868	868
Oil Filler	4.5000A	140	140	140	140	140	140
Dipstick	4.6000A	947	947	947	946*	946*	946*
Oil Pan	4.7000A	679	679	679	679	679	679
Ventilating System	4.8000A	807	807	807	808	808	808
Fresh Water Pump	5.1000	212	212	212	210	210	210
Thermostat	5.2000B	292	292	292	292	292	292
Water Connections	5.3000B	361	361	361	361	361	361
Exhaust Manifold	6.1000A	516	516	516	516	516	516
Starting Motor	7.3000A	NONE	NONE	NONE	NONE	NONE	NONE
Shut-Off	7.4000C	1014	1014	1014	1014	1014	1014
Engine Mounts	11.1000A	647#	647#	647#	647	647	647

\* Thru 8G13522 & Eff. W/8G13523 use Type 947

# Thru 8G15934 & Eff. W/8G15935 use Type 656

GROUP NAME	GROUP NO.	TYPE NO.					
		MODEL					
		4087-7307	4087-7308	4087-7309	4087-7310	4087-7311	4087-7312
Cylinder Block	1.1000	183	183	183	183	183	183
Cylinder Head	1.2000	214	214	214	214	214	214
Engine Lifter Bracket	1.2000A	214	214	214	214	214	214
Crankshaft	1.3000	74	74	74	74	74	74
Crankshaft Front Cover	1.3000A	133	133	133	133	133	133
Crankshaft Pulley	1.3000C	370	370	370	370	370	370
Flywheel	1.4000A	964	967	964	967	968	964
Flywheel Housing	1.5000A	597	598	597	598	597	597
Connecting Rod and Piston	1.6000	189	189	189	189	189	189
Camshaft and Gear Train	1.7000	241	241	241	241	241	241
Valve Operating Mechanism	1.8000	155	155	155	155	155	155
Rocker Cover	1.8000A	455	455	455	455	455	455
Fuel Injector	2.1000A	173	174	174	174	174	174
Fuel Pump	2.2000	187	187	187	187	187	187
Fuel Filter	2.3000A	684	684	684	684	684	684
Fuel Lines	2.5000A	1548	1548	1548	1548	1548	1548
Governor, Mechanical	2.7000A	1601=	1601	1601	1601	1601	1601
Injector Controls	2.9000	297	297	297	297	297	297
Air Cleaner	3.1000A	365	365	365	365	365	365
Air Inlet Housing	3.3000A	626	626	626	626	626	626
Turbocharger	3.5000A	443	443	443	443	443	443
Oil Pump	4.1000A	151	151	151	151	151	151
Oil Distribution System	4.1000B	455	455	455	455	455	455
Oil Pressure Regulator	4.1000C	25	25	25	25	25	25
Oil Filter	4.2000A	347	347	347	347	347	347
Oil Cooler	4.4000A	868	868	868	868	868	868
Oil Filler	4.5000A	140	140	140	140	140	140
Dipstick	4.6000A	947	947	947	947	947	946+
Oil Pan	4.7000A	679	679	679	679	679	679
Ventilating System	4.8000A	807	808	807	807	807	808
Fresh Water Pump	5.1000	212	210	212	212	212	210
Thermostat	5.2000B	292	292	292	292	292	292
Water Connections	5.3000B	361	361	361	361	361	361
Exhaust Manifold	6.1000A	516	516	516	516	516	516
Starting Motor	7.3000A	NONE	NONE	311	311	311	311
Shut-Off	7.4000C	1014	1014	1014	1014	1014	1014
Engine Mounts	11.1000A	647#	647	647	647	647	647

= Thru 8G26798 &amp; Eff. W/8G26799 use Type 1731

+ Thru 8G21146 &amp; Eff. W/8G21147 use Type 947

# Thru 8G15934 &amp; Eff. W/8G15935 use Type 656

# DETROIT DIESEL

## STANDARD EQUIPMENT

## 8.2 ENGINES

GROUP NAME	GROUP NO.	TYPE NO.					
		MODEL					
		4087-7313	4087-7314	4087-7315	4087-7316	4087-7317	4087-7318
Cylinder Block	1.1000	183	183	183	183	183	183
Cylinder Head	1.2000	214	214	214	214	214	214
Engine Lifter Bracket	1.2000A	214	214	214	214	214	214
Crankshaft	1.3000	74	74	74	74	74	74
Crankshaft Front Cover	1.3000A	133	133	133	133	133	133
Crankshaft Pulley	1.3000C	370	370	370	370	370	370
Flywheel	1.4000A	967	968	967	967	967	968
Flywheel Housing	1.5000A	598	597	598	598	598	597
Connecting Rod and Piston	1.6000	189	189	189	189	189	189
Camshaft and Gear Train	1.7000	241	241	241	241	241	241
Valve Operating Mechanism	1.8000	155	155	155	155	155	155
Rocker Cover	1.8000A	455	455	455	455	455	455
Fuel Injector	2.1000A	174	174	174	173	173	173
Fuel Pump	2.2000	187	187	187	187	187	187
Fuel Filter	2.3000A	684	684	684	684	684	684
Fuel Lines	2.5000A	1548	1548	1548	1548	1548	1548
Governor, Mechanical	2.7000A	1601	1601	1601	1601=	1601=	1601=
Injector Controls	2.9000	297	297	297	297	297	297
Air Cleaner	3.1000A	365	365	365	365	365	365
Air Inlet Housing	3.3000A	626	626	626	626	626	626
Turbocharger	3.5000A	443	443	443	443	443	433
Oil Pump	4.1000A	151	151	151	151	151	151
Oil Distribution System	4.1000B	455	455	455	455	455	455
Oil Pressure Regulator	4.1000C	25	25	25	25	25	25
Oil Filter	4.2000A	347	347	347	347	347	347
Oil Cooler	4.4000A	868	868	868	868	868	868
Oil Filler	4.5000A	140	140	140	140	140	140
Dipstick	4.6000A	946+	946+	947	947	946*	946*
Oil Pan	4.7000A	679	679	679	679	679	679
Ventilating System	4.8000A	808	808	808	807	808	808
Fresh Water Pump	5.1000	210	210	210	212	210	210
Thermostat	5.2000B	292	292	292	292	292	292
Water Connections	5.3000B	361	361	361	361	361	361
Exhaust Manifold	6.1000A	516	516	516	516	516	516
Starting Motor	7.3000A	311	311	311	NONE	NONE	NONE
Shut-Off	7.4000C	1014	1014	1014	1014	1014	1014
Engine Mounts	11.1000A	647	647	647	647	647	647

\* Thru 8G13522 & Eff. W/8G13523 use Type 947

= Thru 8G26798 & Eff. W/8G26799 use Type 1731

+ Thru 8G21146 & Eff. W/8G21147 Use Type 947

GROUP NAME	GROUP NO.	TYPE NO.					
		MODEL					
		4087-7319	4087-7320	4087-7321	4087-7322	4087-7323	4087-7324
Cylinder Block	1.1000	183	183	183	183	183	183
Cylinder Head	1.2000	214	214	214	214	214	214
Engine Lifter Bracket	1.2000A	214	214	214	214	214	214
Crankshaft	1.3000	74	74	74	74	74	74
Crankshaft Front Cover	1.3000A	133	133	133	133	133	133
Crankshaft Pulley	1.3000C	370	370	370	370	370	370
Flywheel	1.4000A	964	967	968	964	967	968
Flywheel Housing	1.5000A	597	598	597	597	598	597
Connecting Rod and Piston	1.6000	189	189	189	189	189	189
Camshaft and Gear Train	1.7000	241	241	241	241	241	241
Valve Operating Mechanism	1.8000	155	155	155	155	155	155
Rocker Cover	1.8000A	455	455	455	455	455	455
Fuel Injector	2.1000A	193	193	193	193	193	193
Fuel Pump	2.2000	187	187	187	187	187	187
Fuel Filter	2.3000A	684	684	684	684	684	684
Fuel Lines	2.5000A	1548	1548	1548	1548	1548	1548
Governor, Mechanical	2.7000A	1601	1601	1601	1601	1601	1601
Injector Controls	2.9000	297	297	297	297	297	297
Air Cleaner	3.1000A	365	365	365	365	365	365
Air Inlet Housing	3.3000A	626	626	626	626	626	626
Turbocharger	3.5000A	443	443	443	443	443	443
Oil Pump	4.1000A	151	151	151	151	151	151
Oil Distribution System	4.1000B	455	455	455	455	455	455
Oil Pressure Regulator	4.1000C	25	25	25	25	25	25
Oil Filter	4.2000A	347	347	347	347	347	347
Oil Cooler	4.4000A	868	868	868	868	868	868
Oil Filler	4.5000A	140	140	140	140	140	140
Dipstick	4.6000A	947	947	947	946*	946*	946*
Oil Pan	4.7000A	679	679	679	679	679	679
Ventilating System	4.8000A	807	807	807	808	808	808
Fresh Water Pump	5.1000	212	212	212	210	210	210
Thermostat	5.2000B	292	292	292	292	292	292
Water Connections	5.3000B	361	361	361	361	361	361
Exhaust Manifold	6.1000A	516	516	516	516	516	516
Starting Motor	7.3000A	NONE	NONE	NONE	NONE	NONE	NONE
Shut-Off	7.4000C	1014	1014	1014	1014	1014	1014
Engine Mounts	11.1000A	647#	647#	647#	647	647	647

\*Thru 8G13522 & Eff. W/8G13523 use Type 947

# Thru 8G15934 & Eff. W/8G15935 use Type 656

# DETROIT DIESEL

## STANDARD EQUIPMENT

## 8.2 ENGINES

GROUP NAME	GROUP NO.	TYPE NO.					
		MODEL					
		4087-7325	4087-7326	4087-7327	4087-7328	4087-7329	4087-7330
Cylinder Block	1.1000	183	183	183	183	183	183
Cylinder Head	1.2000	214	214	214	214	214	214
Engine Lifter Bracket	1.2000A	214	214	214	214	214	214
Crankshaft	1.3000	74	74	74	74	74	74
Crankshaft Front Cover	1.3000A	133	133	133	133	133	133
Crankshaft Pulley	1.3000C	370	370	370	370	370	370
Flywheel	1.4000A	967	964	967	968	964	967
Flywheel Housing	1.5000A	598	597	598	597	597	598
Connecting Rod and Piston	1.6000	189	189	189	189	189	189
Camshaft and Gear Train	1.7000	241	241	241	241	241	241
Valve Operating Mechanism	1.8000	155	155	155	155	155	155
Rocker Cover	1.8000A	455	455	455	455	455	455
Fuel Injector	2.1000A	193	193	193	193	193	193
Fuel Pump	2.2000	187	187	187	187	187	187
Fuel Filter	2.3000A	684	684	684	684	684	684
Fuel Lines	2.5000A	1548	1548	1548	1548	1548	1548
Governor, Mechanical	2.7000A	1601	1601	1601	1601	1601	1601
Injector Controls	2.9000	297	297	297	297	297	297
Air Cleaner	3.1000A	365	365	365	365	365	365
Air Inlet Housing	3.3000A	626	626	626	626	626	626
Turbocharger	3.5000A	443	443	443	443	443	443
Oil Pump	4.1000A	151	151	151	151	151	151
Oil Distribution System	4.1000B	455	455	455	455	455	455
Oil Pressure Regulator	4.1000C	25	25	25	25	25	25
Oil Filter	4.2000A	347	347	347	347	347	347
Oil Cooler	4.4000A	868	868	868	868	868	868
Oil Filler	4.5000A	140	140	140	140	140	140
Dipstick	4.6000A	947	947	947	947	946+	946+
Oil Pan	4.7000A	679	679	679	679	679	679
Ventilating System	4.8000A	808	807	807	807	808	808
Fresh Water Pump	5.1000	210	212	212	212	210	210
Thermostat	5.2000B	292	292	292	292	292	292
Water Connections	5.3000B	361	361	361	361	361	361
Exhaust Manifold	6.1000A	516	516	516	516	516	516
Starting Motor	7.3000A	NONE	311	311	311	311	311
Shut-Off	7.4000C	1014	1014	1014	1014	1014	1014
Engine Mounts	11.1000A	647	647	647	647	647	647

+ Thru 8G21146 & Eff. W/8G21147 use Type 947



GROUP NAME	GROUP NO.	TYPE NO.					
		MODEL					
		4087-7331	4087-7332	4087-7333	4087-7334		
Cylinder Block	1.1000	183	183	183	183		
Cylinder Head	1.2000	214	214	214	214		
Engine Lifter Bracket	1.2000A	214	214	214	214		
Crankshaft	1.3000	74	74	74	74		
Crankshaft Front Cover	1.3000A	133	133	133	133		
Crankshaft Pulley	1.3000C	370	370	370	370		
Flywheel	1.4000A	968	967	964	968		
Flywheel Housing	1.5000A	597	598	597	597		
Connecting Rod and Piston	1.6000	189	189	189	189		
Camshaft and Gear Train	1.7000	241	241	241	241		
Valve Operating Mechanism	1.8000	155	155	155	155		
Rocker Cover	1.8000A	455	455	455	455		
Fuel Injector	2.1000A	193	193	173	173		
Fuel Pump	2.2000	187	187	187	187		
Fuel Filter	2.3000A	684	684	684	684		
Fuel Lines	2.5000A	1548	1548	1548	1548		
Governor, Mechanical	2.7000A	1601	1601	1601=	1601=		
Injector Controls	2.9000	297	297	297	297		
Air Cleaner	3.1000A	365	365	365	365		
Air Inlet Housing	3.3000A	626	626	626	626		
Turbocharger	3.5000A	443	443	443	443		
Oil Pump	4.1000A	151	151	151	151		
Oil Distribution System	4.1000B	455	455	455	455		
Oil Pressure Regulator	4.1000C	25	25	25	25		
Oil Filter	4.2000A	347	347	347	347		
Oil Cooler	4.4000A	868	868	868	868		
Oil Filler	4.5000A	140	140	140	140		
Dipstick	4.6000A	946+	947	946*	947		
Oil Pan	4.7000A	679	679	679	679		
Ventilating System	4.8000A	808	808	808	807		
Fresh Water Pump	5.1000	210	210	210	212		
Thermostat	5.2000B	292	292	292	292		
Water Connections	5.3000B	361	361	361	361		
Exhaust Manifold	6.1000A	516	516	516	516		
Starting Motor	7.3000A	311	311	NONE	NONE		
Shut-Off	7.4000C	1014	1014	1014	1014		
Engine Mounts	11.1000A	647	647	647	647#		

\* Thru 8G13522 &amp; Eff. W/8G13523 use Type 947

\* Thru 8G21146 &amp; Eff. W/8G21147 use Type 947

= Thru 8G26798 &amp; Eff. W/8G26799 use Type 1731

# Thru 8G15934 &amp; Eff. W/8G15935 use Type 656

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK	1.1000	183
CYLINDER HEAD THRU 8G-116263	1.2000	155
CYLINDER HEAD EFF. WITH 8G-116264	1.2000	170
ENGINE LIFTER BRACKET	1.2000A	225
CRANKSHAFT	1.3000	74
CRANKSHAFT FRONT COVER THRU 8G-68987	1.3000A	137
CRANKSHAFT FRONT COVER EFF. WITH 8G-68988	1.3000A	142
CRANKSHAFT PULLEY	1.3000C	370
FLYWHEEL	1.4000A	1022
FLYWHEEL HOUSING	1.5000A	638
FLYWHEEL HOUSING ADAPTOR	1.5000B	45
CONNECTING ROD AND PISTON	1.6000	189
CAMSHAFT AND GEAR TRAIN	1.7000	241
VALVE OPERATING MECHANISM THRU 8G-78168	1.8000	155
VALVE OPERATING MECHANISM EFF. WITH 8G-78169	1.8000	214
ROCKER COVER THRU 8G-62898	1.8000A	455
ROCKER COVER EFF. WITH 8G-62899 AND THRU 8G-116263	1.8000A	498
ROCKER COVER EFF. WITH 8G-116264	1.8000A	523
FUEL INJECTOR	2.1000A	200
FUEL PUMP	2.2000	200
FUEL FILTER	2.3000A	804
FUEL LINES	2.5000A	1647
MECHANICAL GOVERNOR	2.7000A	1878
INJECTOR CONTROLS	2.9000	297
AIR SILENCER	3.2000A	59
AIR INLET HOUSING	3.3000A	626
TURBOCHARGER	3.5000A	694
OIL PUMP	4.1000A	151
OIL DISTRIBUTION SYSTEM	4.1000B	455
OIL PRESSURE REGULATOR	4.1000C	25
OIL FILTER	4.2000A	453
OIL FILTER LINES	4.3000A	195
OIL COOLER	4.4000A	983
OIL FILLER CAP THRU 8G-116263	4.5000A	55
OIL FILLER CAP EFF. WITH 8G-116264	4.5000A	164
DIPSTICK	4.6000A	946
OIL PAN	4.7000A	724
VENTILATING SYSTEM	4.8000A	851
FRESH WATER PUMP	5.1000	237
THERMOSTAT	5.2000B	315
WATER CONNECTIONS	5.3000B	388
HEAT EXCHANGER	5.5000A	495
RAW WATER PUMP	5.6000A	99
EXHAUST MANIFOLD	6.1000A	547
BATTERY CHARGING GENERATOR	7.1000A	2130
STARTING MOTOR	7.3000A	343
SHUT-OFF	7.4000C	1014
REVERSE AND REDUCTION GEAR	9.1000A	1076
ENGINE MOUNTING	11.1000A	668

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK	1.1000	183
CYLINDER HEAD THRU 8G-116263	1.2000	155
CYLINDER HEAD EFF. WITH 8G-116264	1.2000	170
ENGINE LIFTER BRACKET	1.2000A	225
CRANKSHAFT	1.3000	74
CRANKSHAFT FRONT COVER THRU 8G-68987	1.3000A	137
CRANKSHAFT FRONT COVER EFF. WITH 8G-68988	1.3000A	142
CRANKSHAFT PULLEY	1.3000C	370
FLYWHEEL	1.4000A	1022
FLYWHEEL HOUSING	1.5000A	638
FLYWHEEL HOUSING ADAPTOR	1.5000B	45
CONNECTING ROD AND PISTON	1.6000	189
CAMSHAFT AND GEAR TRAIN	1.7000	241
VALVE OPERATING MECHANISM THRU 8G-78168	1.8000	155
VALVE OPERATING MECHANISM EFF. WITH 8G-78169	1.8000	214
ROCKER COVER THRU 8G-62898	1.8000A	455
ROCKER COVER EFF. WITH 8G-62899 AND THRU 8G-116263	1.8000A	498
ROCKER COVER EFF. WITH 8G-116264	1.8000A	523
FUEL INJECTOR	2.1000A	200
FUEL PUMP	2.2000	200
FUEL FILTER	2.3000A	804
FUEL LINES	2.5000A	1647
MECHANICAL GOVERNOR	2.7000A	1878
INJECTOR CONTROLS	2.9000	297
AIR SILENCER	3.2000A	60
AIR INLET HOUSING	3.3000A	626
TURBOCHARGER	3.5000A	693
OIL PUMP	4.1000A	151
OIL DISTRIBUTION SYSTEM	4.1000B	455
OIL PRESSURE REGULATOR	4.1000C	25
OIL FILTER	4.2000A	453
OIL FILTER LINES	4.3000A	195
OIL COOLER	4.4000A	983
OIL FILLER CAP THRU 8G-116263	4.5000A	55
OIL FILLER CAP EFF. WITH 8G-116264	4.5000A	164
DIPSTICK	4.6000A	947
OIL PAN	4.7000A	724
VENTILATING SYSTEM	4.8000A	848
FRESH WATER PUMP	5.1000	237
THERMOSTAT	5.2000B	315
WATER CONNECTIONS	5.3000B	389
HEAT EXCHANGER	5.5000A	495
RAW WATER PUMP	5.6000A	99
EXHAUST MANIFOLD	6.1000A	547
BATTERY CHARGING GENERATOR	7.1000A	2130
STARTING MOTOR	7.3000A	343
SHUT-OFF	7.4000C	1014
REVERSE AND REDUCTION GEAR	9.1000A	1076
ENGINE MOUNTING	11.1000A	668

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK	1.1000	183
CYLINDER HEAD THRU 8G-115921	1.2000	153
CYLINDER HEAD EFF. WITH 8G-115922	1.2000	169
ENGINE LIFTER BRACKET STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	1.2000A	214
CRANKSHAFT	1.3000	74
CRANKSHAFT FRONT COVER THRU 8G54092	1.3000A	133
CRANKSHAFT FRONT COVER EFF. WITH 8G54093 AND THRU 8G81675	1.3000A	137
CRANKSHAFT FRONT COVER EFF. WITH 8G81676	1.3000A	143
CRANKSHAFT PULLEY STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	1.3000C	370
FLYWHEEL	1.4000A	964
FLYWHEEL HOUSING	1.5000A	597
CONNECTING ROD AND PISTON	1.6000	188
CAMSHAFT AND GEAR TRAIN	1.7000	240
VALVE OPERATING MECHANISM THRU 8G78168	1.8000	155
VALVE OPERATING MECHANISM EFF. WITH 8G78169	1.8000	214
ROCKER COVER THRU 8G-62898	1.8000A	455
ROCKER COVER EFF. WITH 8G-62899 AND THRU 8G-115921	1.8000A	498
ROCKER COVER EFF. WITH 8G-115922	1.8000A	523
FUEL INJECTOR	2.1000A	173
FUEL PUMP THRU 8G-78165	2.2000	187
FUEL PUMP EFF. WITH 8G-78166	2.2000	198
FUEL FILTER THRU 8G54092	2.3000A	684
FUEL FILTER EFF. WITH 8G54093	2.3000A	792
FUEL LINES THRU 8G54092	2.5000A	1548
FUEL LINES EFF. WITH 8G54093 AND THRU 8G81675	2.5000A	1614
FUEL LINES EFF. WITH 8G81676 STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	2.5000A	1644
FUEL LINES	2.5000A	1644
MECHANICAL GOVERNOR	2.7000A	1876
INJECTOR CONTROLS	2.9000	297
AIR CLEANER STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	3.1000A	366
AIR CLEANER	3.1000A	372
AIR INLET HOUSING	3.3000A	626
OIL PUMP	4.1000A	151
OIL DISTRIBUTION SYSTEM	4.1000B	455
OIL PRESSURE REGULATOR	4.1000C	25
OIL FILTER THRU 8G102384	4.2000A	347
OIL FILTER EFF. WITH 8G102385	4.2000A	464
OIL COOLER STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	4.4000A	868
OIL COOLER	4.4000A	1079
OIL FILLER CAP THRU 8G-115921	4.5000A	55
OIL FILLER CAP EFF. WITH 8G-115922	4.5000A	164
DIPSTICK STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	4.6000A	947
OIL PAN	4.7000A	718
VENTILATING SYSTEM	4.8000A	847
FRESH WATER PUMP	5.1000	248
THERMOSTAT	5.2000B	329
WATER CONNECTIONS STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	5.3000B	361
WATER CONNECTIONS	5.3000B	402
EXHAUST MANIFOLD	6.1000A	517
SHUT-OFF STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	7.4000C	1014
ENGINE MOUNTING	11.1000A	670

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	1.1000	183
CYLINDER HEAD THRU 8G-116263	1.2000	153
CYLINDER HEAD EFF. WITH 8G-116264	1.2000	169
ENGINE LIFTER BRACKET STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	1.2000A	214
CRANKSHAFT	1.3000	74
CRANKSHAFT FRONT COVER THRU 8G54092	1.3000A	133
CRANKSHAFT FRONT COVER EFF. WITH 8G54093 AND THRU 8G81675	1.3000A	137
CRANKSHAFT FRONT COVER EFF. WITH 8G81676	1.3000A	143
CRANKSHAFT PULLEY STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	1.3000C	370
FLYWHEEL	1.4000A	964
FLYWHEEL HOUSING	1.5000A	655
CONNECTING ROD AND PISTON	1.6000	189
CAMSHAFT AND GEAR TRAIN	1.7000	241
VALVE OPERATING MECHANISM THRU 8G78168	1.8000	155
VALVE OPERATION MECHANISM EFF. WITH 8G78169	1.8000	214
ROCKER COVER THRU 8G62898	1.8000A	455
ROCKER COVER EFF. WITH 8G-62899 AND THRU 8G-116263	1.8000A	498
ROCKER COVER EFF. WITH 8G-116264	1.8000A	523
FUEL INJECTOR	2.1000A	174
FUEL PUMP THRU 8G78165	2.2000	187
FUEL PUMP EFF. WITH 8G78166	2.2000	198
FUEL FILTER THRU 8G54092	2.3000A	684
FUEL FILTER EFF. WITH 8G54093 AND STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	2.3000A	792
FUEL LINES THRU 8G54092	2.5000A	1548
FUEL LINES EFF. WITH 8G54093 AND THRU 8G81675	2.5000A	1614
FUEL LINES EFF. WITH 8G81676 AND STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	2.5000A	1644
MECHANICAL GOVERNOR	2.7000A	1876
INJECTOR CONTROLS	2.9000	292
AIR CLEANER STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	3.1000A	365
AIR INLET HOUSING	3.3000A	626
TURBOCHARGER	3.5000A	443
OIL PUMP	4.1000A	151
OIL DISTRIBUTION SYSTEM	4.1000B	455
OIL PRESSURE REGULATOR	4.1000C	25
OIL FILTER THRU 8G102384	4.2000A	347
OIL FILTER EFF. WITH 8G102385	4.2000A	464
OIL COOLER STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	4.4000A	868
OIL COOLER	4.4000A	1079
OIL FILLER CAP THRU 8G-116263	4.5000A	55
OIL FILLER CAP EFF. WITH 8G-116264	4.5000A	164
DIPSTICK STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	4.6000A	947
OIL PAN	4.7000A	718
VENTILATING SYSTEM	4.8000A	846
FRESH WATER PUMP	5.1000	248
THERMOSTAT	5.2000B	329
WATER CONNECTIONS STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	5.3000B	361
WATER CONNECTIONS	5.3000B	402
EXHAUST MANIFOLD STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	6.1000A	516
SHUT-OFF STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	7.4000C	1014
ENGINE MOUNTING	11.1000A	670

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK .....	1.1000	183
CYLINDER HEAD .....	1.2000	169
ENGINE LIFTER BRACKET .....	1.2000A	214
CRANKSHAFT .....	1.3000	74
CRANKSHAFT FRONT COVER .....	1.3000A	143
CRANKSHAFT PULLEY .....	1.3000C	370
FLYWHEEL .....	1.4000A	964
FLYWHEEL HOUSING .....	1.5000A	597
CONNECTING ROD AND PISTON .....	1.6000	188
CAMSHAFT AND GEAR TRAIN .....	1.7000	240
ROCKER COVER .....	1.8000A	523
FUEL INJECTOR .....	2.1000A	173
FUEL PUMP .....	2.2000	198
FUEL FILTER .....	2.3000A	792
FUEL LINES .....	2.5000A	1646
MECHANICAL GOVERNOR .....	2.7000A	1876
INJECTOR CONTROLS .....	2.9000	297
AIR CLEANER .....	3.1000A	372
AIR INLET HOUSING .....	3.3000A	626
OIL PUMP .....	4.1000A	151
OIL DISTRIBUTION SYSTEM .....	4.1000B	455
OIL PRESSURE REGULATOR .....	4.1000C	25
OIL FILTER .....	4.2000A	464
OIL COOLER .....	4.4000A	1099
OIL FILLER .....	4.5000A	163
DIPSTICK .....	4.6000A	946
OIL PAN .....	4.7000A	718
VENTILATING SYSTEM (ON ROCKER COVER) .....	4.8000A	847
FRESH WATER PUMP .....	5.1000	255
THERMOSTAT .....	5.2000B	340
WATER CONNECTIONS .....	5.3000B	393
EXHAUST MANIFOLD .....	6.1000A	517
BATTERY CHARGING GENERATOR .....	7.1000A	2175
STARTING MOTOR .....	7.3000A	311
SHUT-OFF OR ALARM SYSTEM .....	7.4000C	1014
ENGINE MOUNTING .....	11.1000A	670

## DETROIT DIESEL 8.2 L ENGINES

4084-7312

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK .....	1.1000	183
CYLINDER HEAD .....	1.2000	169
ENGINE LIFTER BRACKET .....	1.2000A	214
CRANKSHAFT .....	1.3000	74
CRANKSHAFT FRONT COVER .....	1.3000A	143
CRANKSHAFT PULLEY .....	1.3000C	370
FLYWHEEL .....	1.4000A	964
FLYWHEEL HOUSING .....	1.5000A	655
CONNECTING ROD AND PISTON .....	1.6000	271
CAMSHAFT AND GEAR TRAIN .....	1.7000	241
ROCKER COVER .....	1.8000A	523
FUEL INJECTOR .....	2.1000A	233
FUEL PUMP .....	2.2000	198
FUEL FILTER .....	2.3000A	792
FUEL LINES .....	2.5000A	1646
MECHANICAL GOVERNOR .....	2.7000A	1876
INJECTOR CONTROLS .....	2.9000	297
AIR CLEANER .....	3.1000A	365
AIR INLET HOUSING .....	3.3000A	626
TURBOCHARGER .....	3.5000A	443
OIL PUMP .....	4.1000A	151
OIL DISTRIBUTION SYSTEM .....	4.1000B	455
OIL PRESSURE REGULATOR .....	4.1000C	25
OIL FILTER .....	4.2000A	464
OIL COOLER .....	4.4000A	1100
OIL FILLER .....	4.5000A	164
DIPSTICK .....	4.6000A	946
OIL PAN .....	4.7000A	718
VENTILATING SYSTEM (ON ROCKER COVER) .....	4.8000A	846
FRESH WATER PUMP .....	5.1000	255
THERMOSTAT .....	5.2000B	340
WATER CONNECTIONS .....	5.3000B	393
EXHAUST MANIFOLD .....	6.1000A	516
BATTERY CHARGING GENERATOR .....	7.1000A	2175
STARTING MOTOR .....	7.3000A	311
SHUT-OFF OR ALARM SYSTEM .....	7.4000C	1014
ENGINE MOUNTING .....	11.1000A	670

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK	1.1000	183
CYLINDER HEAD THRU 8G-115921	1.2000	153
CYLINDER HEAD EFF. WITH 8G-115922	1.2000	169
ENGINE LIFTER BRACKET	1.2000A	214
CRANKSHAFT	1.3000	74
CRANKSHAFT FRONT COVER THRU 8G54092	1.3000A	133
CRANKSHAFT FRONT COVER EFF. WITH 8G54093 AND THRU 8G81675	1.3000A	137
CRANKSHAFT FRONT COVER EFF. WITH 8G81676	1.3000A	143
CRANKSHAFT PULLEY STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	1.3000C	370
FLYWHEEL	1.4000A	964
FLYWHEEL HOUSING	1.5000A	597
CONNECTING ROD AND PISTON	1.6000	188
CAMSHAFT AND GEAR TRAIN	1.7000	240
VALVE OPERATING MECHANISM THRU 8G78168	1.8000	155
VALVE OPERATING MECHANISM EFF. WITH 8G78169	1.8000	214
ROCKER COVER THRU 8G62898	1.8000A	455
ROCKER COVER EFF. WITH 8G-62899 AND THRU 8G-115921	1.8000A	498
ROCKER COVER EFF. WITH 8G-115922	1.8000A	523
FUEL INJECTOR	2.1000A	173
FUEL PUMP THRU 8G78165	2.2000	187
FUEL PUMP EFF. WITH 8G78166	2.2000	198
FUEL FILTER STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	2.3000A	684
FUEL FILTER	2.3000A	792
FUEL LINES STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	2.5000A	1548
FUEL LINES	2.5000A	1644
MECHANICAL GOVERNOR	2.7000A	1876
INJECTOR CONTROLS	2.9000	297
AIR CLEANER	3.1000A	366
AIR INLET HOUSING	3.3000A	626
OIL PUMP	4.1000A	151
OIL DISTRIBUTION SYSTEM	4.1000B	455
OIL PRESSURE REGULATOR	4.1000C	25
OIL FILTER STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	4.2000A	347
OIL FILTER	4.2000A	464
COOLER STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	4.4000A	868
OIL COOLER	4.4000A	868
OIL FILLER CAP THRU 8G-115921	4.5000A	55
OIL FILLER CAP EFF. WITH 8G-115922	4.5000A	163
DIPSTICK	4.6000A	947
OIL PAN THRU 8G54092	4.7000A	679
OIL PAN EFF. WITH 8G54093 AND STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	4.7000A	718
VENTILATING SYSTEM	4.8000A	847
FRESH WATER PUMP	5.1000	248
THERMOSTAT	5.2000B	329
WATER CONNECTIONS STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	5.3000B	361
WATER CONNECTIONS	5.3000B	402
EXHAUST MANIFOLD	6.1000A	517
SHUT-OFF STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	7.4000C	1014
ENGINE MOUNTING	11.1000A	670



## DETROIT DIESEL 8.2 L ENGINES

4087-7130

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK	1.1000	183
CYLINDER HEAD THRU 8G-115921	1.2000	153
CYLINDER HEAD EFF. WITH 8G-115922	1.2000	169
ENGINE LIFTER BRACKET	1.2000A	214
CRANKSHAFT	1.3000	74
CRANKSHAFT FRONT COVER THRU 8G81675	1.3000A	137
CRANKSHAFT FRONT COVER EFF. WITH 8G81676	1.3000A	143
CRANKSHAFT PULLEY	1.3000C	370
FLYWHEEL	1.4000A	964
FLYWHEEL HOUSING	1.5000A	597
CONNECTING ROD AND PISTON	1.6000	188
CAMSHAFT	1.7000	240
VALVE OPERATING MECHANISM THRU 8G78168	1.8000	155
VALVE OPERATING MECHANISM EFF. WITH 8G78169	1.8000	214
ROCKER COVER THRU 8G62898	1.8000A	455
ROCKER COVER EFF. WITH 8G-62899 AND THRU 8G-115921	1.8000A	498
ROCKER COVER EFF. WITH 8G-115922	1.8000A	523
FUEL INJECTOR	2.1000A	196
FUEL PUMP THRU 8G78165	2.2000	187
FUEL PUMP EFF. WITH 8G78166	2.2000	198
FUEL FILTER	2.3000A	792
FUEL LINES	2.5000A	1645
MECHANICAL GOVERNOR	2.7000A	1876
INJECTOR CONTROLS	2.9000	297
AIR CLEANER	3.1000A	366
AIR INLET HOUSING	3.3000A	626
OIL PUMP	4.1000A	151
OIL DISTRIBUTION SYSTEM	4.1000B	455
OIL PRESSURE REGULATOR	4.1000C	25
OIL FILTER	4.2000A	464
OIL COOLER	4.4000A	1083
OIL FILLER CAP THRU 8G-115921	4.5000A	55
OIL FILLER CAP EFF. WITH 8G-115922	4.5000A	163
DIPSTICK	4.6000A	947
OIL PAN	4.7000A	718
VENTILATING SYSTEM	4.8000A	847
FRESH WATER PUMP	5.1000	248
THERMOSTAT	5.2000B	329
WATER CONNECTIONS	5.3000B	402
EXHAUST MANIFOLD	6.1000A	517
SHUT-OFF	7.4000C	1014
ENGINE MOUNTING	11.1000A	670

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK .....	1.1000	183
CYLINDER HEAD THRU 8G-115921 .....	1.2000	153
CYLINDER HEAD EFF. WITH 8G-115922 .....	1.2000	169
ENGINE LIFTER BRACKET .....	1.2000A	214
CRANKSHAFT .....	1.3000	74
CRANKSHAFT FRONT COVER THRU 8G-81675 .....	1.3000A	137
CRANKSHAFT FRONT COVER EFF. WITH 8G-81676 .....	1.3000A	143
CRANKSHAFT PULLEY .....	1.3000C	370
FLYWHEEL .....	1.4000A	964
FLYWHEEL HOUSING .....	1.5000A	597
CONNECTING ROD AND PISTON .....	1.6000	188
CAMSHAFT .....	1.7000	240
VALVE OPERATING MECHANISM .....	1.8000	214
ROCKER COVER THRU 8G-62898 .....	1.8000A	455
ROCKER COVER EFF. WITH 8G-62899 AND THRU 8G-115921 .....	1.8000A	498
ROCKER COVER EFF. WITH 8G-115922 .....	1.8000A	523
FUEL INJECTOR .....	2.1000A	210
FUEL PUMP .....	2.2000	198
FUEL FILTER .....	2.3000A	792
FUEL LINES .....	2.5000A	1645
MECHANICAL GOVERNOR .....	2.7000A	1876
INJECTOR CONTROLS .....	2.9000	297
AIR CLEANER .....	3.1000A	372
AIR INLET HOUSING .....	3.3000A	626
OIL PUMP .....	4.1000A	151
OIL DISTRIBUTION SYSTEM .....	4.1000B	455
OIL PRESSURE REGULATOR .....	4.1000C	25
OIL FILTER .....	4.2000A	464
OIL FILLER CAP THRU 8G-115921 .....	4.5000A	55
OIL FILLER CAP EFF. WITH 8G-115922 .....	4.5000A	163
DIPSTICK .....	4.6000A	947
OIL PAN .....	4.7000A	718
VENTILATING SYSTEM .....	4.8000A	847
FRESH WATER PUMP .....	5.1000	248
THERMOSTAT .....	5.2000B	329
WATER CONNECTIONS .....	5.3000B	402
EXHAUST MANIFOLD .....	6.1000A	517
SHUT-OFF OR ALARM SYSTEM .....	7.4000C	1014
ENGINE MOUNTING .....	11.1000A	670

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK	1.1000	183
CYLINDER HEAD	1.2000	153
ENGINE LIFTER BRACKET	1.2000A	214
CRANKSHAFT STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	1.3000	74
CRANKSHAFT FRONT COVER THRU 8G54092	1.3000A	133
CRANKSHAFT FRONT COVER EFF. WITH 8G54092 AND THRU 8G81675	1.3000A	137
CRANKSHAFT FRONT COVER EFF. 8G81676	1.3000A	143
CRANKSHAFT PULLEY	1.3000C	370
FLYWHEEL	1.4000A	964
FLYWHEEL HOUSING	1.5000A	655
CONNECTING ROD AND PISTON	1.6000	188
CAMSHAFT AND GEAR TRAIN	1.7000	240
VALVE OPERATING MECHANISM THRU 8G78168	1.8000	155
VALVE OPERATING MECHANISM EFF. WITH 8G78169	1.8000	214
ROCKER COVER THRU 8G-62898	1.8000A	455
ROCKER COVER EFF. WITH 8G-62899	1.8000A	498
FUEL INJECTOR	2.1000A	173
FUEL PUMP THRU 8G78165	2.2000	187
FUEL PUMP EFF. WITH 8G78166	2.2000	198
FUEL FILTER	2.3000A	792
FUEL LINES	2.5000A	1644
MECHANICAL GOVERNOR	2.7000A	1876
INJECTOR CONTROLS	2.9000	297
AIR CLEANER	3.1000A	366
AIR INLET HOUSING	3.3000A	626
OIL PUMP	4.1000A	151
OIL DISTRIBUTION SYSTEM	4.1000B	455
OIL PRESSURE REGULATOR	4.1000C	25
OIL FILTER	4.2000A	347
OIL COOLER	4.4000A	868
OIL FILLER	4.5000A	55
DIPSTICK	4.6000A	947
OIL PAN	4.7000A	718
VENTILATING SYSTEM	4.8000A	826
FRESH WATER PUMP	5.1000	233
THERMOSTAT	5.2000B	292
WATER CONNECTIONS	5.3000B	361
EXHAUST MANIFOLD	6.1000A	517
SHUT-OFF OR ALARM SYSTEM	7.4000C	1014
ENGINE MOUNTING	11.1000A	669

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK	1.1000	183
CYLINDER HEAD THRU 8G-116263	1.2000	153
CYLINDER HEAD EFF. WITH 8G-116264	1.2000	169
ENGINE LIFTER BRACKET	1.2000A	214
CRANKSHAFT	1.3000	74
CRANKSHAFT FRONT COVER THRU 8G54092	1.3000A	133
CRANKSHAFT FRONT COVER EFF. WITH 8G54093 AND THRU 8G81675	1.3000A	137
CRANKSHAFT FRONT COVER EFF. WITH 8G81676	1.3000A	143
CRANKSHAFT PULLEY STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	1.3000C	370
FLYWHEEL	1.4000A	964
FLYWHEEL HOUSING	1.5000A	655
CONNECTING ROD AND PISTON	1.6000	189
CAMSHAFT AND GEAR TRAIN	1.7000	241
VALVE OPERATING MECHANISM THRU 8G78168	1.8000	155
VALVE OPERATING MECHANISM EFF. WITH 8G78169	1.8000	214
ROCKER COVER THRU 8G62898	1.8000A	455
ROCKER COVER EFF. WITH 8G-62899 AND THRU 8G-116263	1.8000A	498
ROCKER COVER EFF. WITH 8G-116264	1.8000A	523
FUEL INJECTOR	2.1000A	174
FUEL PUMP THRU 8G78165	2.2000	187
FUEL PUMP EFF. WITH 8G78166	2.2000	198
FUEL FILTER THRU 8G54092	2.3000A	684
FUEL FILTER EFF. WITH 8G54093 AND STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	2.3000A	792
FUEL LINES THRU 8G54092	2.5000A	1548
FUEL LINES EFF. WITH 8G54093 AND THRU 8G81675	2.5000A	1614
FUEL LINES EFF. WITH 8G81676 AND STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	2.5000A	1644
MECHANICAL GOVERNOR	2.7000A	1876
INJECTOR CONTROLS	2.9000	297
AIR CLEANER	3.1000A	365
AIR INLET HOUSING	3.3000A	626
TURBOCHARGER	3.5000A	443
OIL PUMP	4.1000A	151
OIL DISTRIBUTION SYSTEM	4.1000B	455
OIL PRESSURE REGULATOR	4.1000C	25
OIL FILTER THRU 8G102384	4.2000A	347
OIL FILTER EFF. WITH 8G102385	4.2000A	464
OIL COOLER STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	4.4000A	868
OIL COOLER	4.4000A	1079
OIL FILLER CAP THRU 8G-116263	4.5000A	55
OIL FILLER CAP EFF. WITH 8G-116264	4.5000A	164
DIPSTICK	4.6000A	947
OIL PAN THRU 8G54092 (THRU 8GT1528)	4.7000A	679
OIL PAN EFF. WITH 8G54093 (EFF. WITH 8GT1529) AND STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	4.7000A	718
VENTILATING SYSTEM	4.8000A	846
FRESH WATER PUMP	5.1000	248
THERMOSTAT	5.2000B	329
WATER CONNECTIONS STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	5.3000B	361
WATER CONNECTIONS	5.3000B	402
EXHAUST MANIFOLD	6.1000A	516
SHUT-OFF STD. EQUIP. PRIOR TO BEING SHOWN ON OPTION LABEL	7.4000C	1014
ENGINE MOUNTING	11.1000A	670

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK .....	1.1000	183
CYLINDER HEAD .....	1.2000	169
ENGINE LIFTER BRACKET .....	1.2000A	214
CRANKSHAFT .....	1.3000	74
CRANKSHAFT FRONT COVER .....	1.3000A	143
CRANKSHAFT PULLEY .....	1.3000C	370
FLYWHEEL .....	1.4000A	964
FLYWHEEL HOUSING .....	1.5000A	655
CONNECTING ROD AND PISTON .....	1.6000	271
CAMSHAFT AND GEAR TRAIN .....	1.7000	241
VALVE OPERATING MECHANISM .....	1.8000	214
ROCKER COVER .....	1.8000A	523
FUEL INJECTOR .....	2.1000A	233
FUEL PUMP .....	2.2000	198
FUEL FILTER .....	2.3000A	828
FUEL LINES .....	2.5000A	1719
MECHANICAL GOVERNOR .....	2.7000A	1876
INJECTOR CONTROLS .....	2.9000	297
AIR CLEANER ADAPTOR .....	3.1000A	365
AIR INLET HOUSING .....	3.3000A	626
TURBOCHARGER .....	3.5000A	827
OIL PUMP .....	4.1000A	151
OIL DISTRIBUTION SYSTEM .....	4.1000B	455
OIL PRESSURE REGULATOR .....	4.1000C	25
OIL FILTER .....	4.2000A	464
OIL COOLER .....	4.4000A	1093
OIL FILLER CAP .....	4.5000A	164
DIPSTICK .....	4.6000A	947
OIL PAN .....	4.7000A	718
VENTILATING SYSTEM (ON ROCKER COVER) .....	4.8000A	846
FRESH WATER PUMP .....	5.1000	248
THERMOSTAT .....	5.2000B	329
WATER CONNECTIONS .....	5.3000B	402
EXHAUST MANIFOLD .....	6.1000A	516
SHUT-OFF OR ALARM SYSTEM .....	7.4000C	1014
ENGINE MOUNTING .....	11.1000A	670

## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK .....	1.1000	183
CYLINDER HEAD THRU 8G-116263 .....	1.2000	153
CYLINDER HEAD EFF. WITH 8G-116264 .....	1.2000	169
ENGINE LIFTER BRACKET .....	1.2000A	214
CRANKSHAFT .....	1.3000	74
CRANKSHAFT FRONT COVER .....	1.3000A	143
CRANKSHAFT PULLEY .....	1.3000C	370
FLYWHEEL .....	1.4000A	964
FLYWHEEL HOUSING .....	1.5000A	655
CONNECTING ROD AND PISTON .....	1.6000	189
CAMSHAFT AND GEAR TRAIN .....	1.7000	241
VALVE OPERATING MECHANISM .....	1.8000	214
ROCKER COVER THRU 8G-116263 .....	1.8000A	498
ROCKER COVER EFF. WITH 8G-116264 .....	1.8000A	523
FUEL INJECTOR .....	2.1000A	232
FUEL PUMP .....	2.2000	198
FUEL FILTER .....	2.3000A	792
FUEL LINES .....	2.5000A	1644
MECHANICAL GOVERNOR .....	2.7000A	1876
INJECTOR CONTROLS .....	2.9000	297
AIR CLEANER ADAPTOR .....	3.1000A	365
AIR INLET HOUSING .....	3.3000A	626
TURBOCHARGER .....	3.5000A	443
OIL PUMP .....	4.1000A	151
OIL DISTRIBUTION SYSTEM .....	4.1000B	455
OIL PRESSURE REGULATOR .....	4.1000C	25
OIL FILTER .....	4.2000A	464
OIL COOLER .....	4.4000A	1100
OIL FILLER CAP THRU 8G-116263 .....	4.5000A	55
OIL FILLER CAP EFF. WITH 8G-116264 .....	4.5000A	164
DIPSTICK .....	4.6000A	947
OIL PAN .....	4.7000A	718
VENTILATING SYSTEM THRU 8G-115921 .....	4.8000A	826
VENTILATING SYSTEM (ON ROCKER COVER) EFF. WITH 8G-115922 .....	4.8000A	846
FRESH WATER PUMP .....	5.1000	248
THERMOSTAT .....	5.2000B	329
WATER CONNECTIONS .....	5.3000B	403
EXHAUST MANIFOLD .....	6.1000A	516
SHUT-OFF OR ALARM SYSTEM .....	7.4000C	1014
ENGINE MOUNTING .....	11.1000A	670

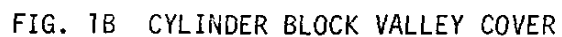
## STANDARD AND STANDARD OPTION EQUIPMENT

GROUP NAME	GROUP NO.	TYPE
CYLINDER BLOCK	1.1000	183
CYLINDER HEAD THRU 8G-116263	1.2000	153
CYLINDER HEAD EFF. WITH 8G-116264	1.2000	169
ENGINE LIFTER BRACKET	1.2000A	214
CRANKSHAFT	1.3000	74
CRANKSHAFT FRONT COVER THRU 8G81675	1.3000A	137
CRANKSHAFT FRONT COVER EFF. WITH 8G81676	1.3000A	143
CRANKSHAFT PULLEY	1.3000C	370
FLYWHEEL	1.4000A	964
FLYWHEEL HOUSING	1.5000A	655
CONNECTING ROD AND PISTON	1.6000	189
CAMSHAFT AND GEAR TRAIN	1.7000	241
VALVE OPERATING MECHANISM	1.8000	155
ROCKER COVER THRU 8G62898	1.8000A	455
ROCKER COVER EFF. WITH 8G-62899 AND THRU 8G-116263	1.8000A	498
ROCKER COVER EFF. WITH 8G-116264	1.8000A	523
FUEL INJECTOR	2.1000A	254
FUEL PUMP THRU 8G78165	2.2000	187
FUEL PUMP EFF. WITH 8G78166	2.2000	198
FUEL FILTER	2.3000A	792
FUEL LINES THRU 8G81675	2.5000A	1614
FUEL LINES EFF. WITH 8G81676	2.5000A	1644
MECHANICAL GOVERNOR	2.7000A	1876
INJECTOR CONTROLS	2.9000	297
AIR CLEANER	3.1000A	365
AIR INLET HOUSING	3.3000A	626
TURBOCHARGER	3.5000A	443
OIL PUMP	4.1000A	151
OIL DISTRIBUTION SYSTEM	4.1000B	455
OIL PRESSURE REGULATOR	4.1000C	25
OIL FILTER THRU 8G102384	4.2000A	347
OIL FILTER EFF. WITH 8G102385	4.2000A	464
OIL COOLER	4.4000A	868
OIL FILLER CAP THRU 8G-116263	4.5000A	55
OIL FILLER CAP EFF. WITH 8G-116264	4.5000A	164
DIPSTICK	4.6000A	947
OIL PAN	4.7000A	718
VENTILATING SYSTEM	4.8000A	846
FRESH WATER PUMP	5.1000	248
THERMOSTAT	5.2000B	329
WATER CONNECTIONS	5.3000B	361
EXHAUST MANIFOLD	6.1000A	516
SHUT-OFF	7.4000C	1014
ENGINE MOUNTING	11.1000A	670

## GROUP NOMENCLATURE

1.0000	ENGINE (less major assemblies)	5.0000	COOLING SYSTEM (CONT'D)
1.1000	Cylinder Block	5.4000B	Fan Shroud
1.1000A	Air Box Drains	5.5000A	Heat Exchanger or Keel Cooling
1.2000	Cylinder Head	5.6000A	Raw Water Pump
1.2000A	Engine Lifter Bracket	5.7000A	Water Filter
1.3000	Crankshaft, Oil Seals and Stabilizers		
1.3000A	Crankshaft Front Cover	6.0000	EXHAUST SYSTEM
1.3000B	Vibration Damper	6.1000A	Exhaust Manifold and/or Connections
1.3000C	Crankshaft Pulley	6.2000A	Exhaust Muffler and/or Connections
1.3000D	Crankshaft Pulley Belt		
1.4000A	Flywheel	7.0000	ELECTRICAL - INSTRUMENTS
1.5000A	Flywheel Housing	7.1000A	Battery Charging Generator
1.5000B	Flywheel Housing Adaptor	7.2000A	Battery Cables
1.6000	Connecting Rod and Piston	7.2000B	Automatic Starting
1.7000	Camshaft and Gear Train	7.2000B	Automatic Starting (Twin and Quad)
1.7000A	Balance Weight Cover	7.3000A	Starting Motor
1.7000B	Accessory Drive	7.4000A	Instruments
1.8000	Valve and Injector Operating Mechanism	7.4000A	Instruments (Twin and Quad)
1.8000A	Rocker Cover	7.4000B	Tachometer Drive
		7.4000B	Tachometer Drive (Twin and Quad)
		7.4000C	Shutoff, Alarm and O.S. Governor
		7.4000C	Shutoff, Alarm and O.S. Governor (Twin and Quad)
		7.5000A	Power Generator
		7.6000A	Control Cabinet
		7.6000A	Control Cabinet (Twin and Quad)
		7.7000A	Wiring Harness
		7.8000A	Air Heater
		7.8000A	Air Heater (Twin and Quad)
		7.10000A	Hydraulic Governor Solenoid
2.0000	FUEL SYSTEM	8.0000	POWER TAKE-OFF
2.1000A	Fuel Injector	8.1000A	Power Take-off and/or Clutch
2.2000	Fuel Pump	8.1000A	Power Take-off and/or Clutch (Twin and Quad)
2.2000A	Fuel Pump Drain	8.3000A	Torque Converter
2.3000A	Fuel Filter and Strainer	8.3000A	Torque Converter (Twin and Quad)
2.3000A	Fuel Filter and Strainer (Twin and Quad)	8.3000B	Transmission Lines
2.4000	Fuel Manifold and/or Connections		
2.4000A	Dual Fuel System	9.0000	TRANSMISSION AND PROPULSION
2.5000A	Fuel Lines and Fuel Cooler	9.1000A	Hydraulic Marine Gear
2.5000A	Fuel Lines and Fuel Cooler (Twin and Quad)	9.1000A	Hydraulic Marine Gear (Twin and Quad)
2.6000A	Fuel Tank	9.2000A	Reverse and Reduction Gear (mechanical)
2.6000B	Electric Governor	9.3000A	Power Transfer Gear
2.7000A	Mechanical Governor	9.3000A	Power Transfer Gear (Twin and Quad)
2.8000A	Hydraulic Governor	9.4000	Transmission—Highway
2.9000	Injector Controls	9.7000	Transmission—Off-highway
2.9000	Injector Controls (Twin and Quad)	9.9000	Transmission—Rail Car
2.9000A	Throttle Controls		
2.9000A	Throttle Controls (Twin and Quad)	10.0000	SHEET METAL
		10.1000A	Engine Hood
3.0000	AIR SYSTEM	11.0000	ENGINE MOUNTING
3.1000A	Air Cleaner and/or Adaptor	11.1000A	Engine Mounting and Base
3.2000A	Air Silencer	11.1000A	Engine Mounting and Base (Twin and Quad)
3.3000A	Air Inlet Housing		
3.4000	Blower and Drive	12.0000	MISCELLANEOUS
3.4000A	Blower Drive Shaft	12.2000A	Bilge Pump
3.4000B	Blower End Plate Cover	12.3000A	Vacuum Pump
3.5000A	Turbocharger, Intercooler, and Aftercooler	12.4000A	Air Compressor
		12.5000A	Hydraulic Pump
4.0000	LUBRICATING SYSTEM	12.6000A	Gasoline Starter
4.1000A	Oil Pump	12.6000B	Air Starter
4.1000B	Oil Distribution System	12.6000C	Cold Weather Starting Aid
4.1000C	Oil Pressure Regulator	12.6000D	Hydraulic Starter
4.2000A	Oil Filter	12.6000E	Hydraulic Starter Accessories
4.3000A	Oil Filter Lines	12.8000A	Supplies
4.4000A	Oil Cooler and Marine Gear Lines	12.8000B	Fabrication Material
4.5000A	Oil Filler	12.8000C	Miscellaneous Service Kits and Sets
4.6000A	Dipstick	12.8000D	Miscellaneous Service Parts
4.7000A	Oil Pan		
4.8000A	Ventilating System		
5.0000	COOLING SYSTEM		
5.1000	Fresh Water Pump		
5.1000A	Fresh Water Pump Cover		
5.2000A	Water Outlet Manifold and/or Elbow		
5.2000B	Thermostat		
5.2000C	Water Bypass Tube		
5.3000A	Radiator		
5.3000B	Water Connections		
5.4000A	Fan		





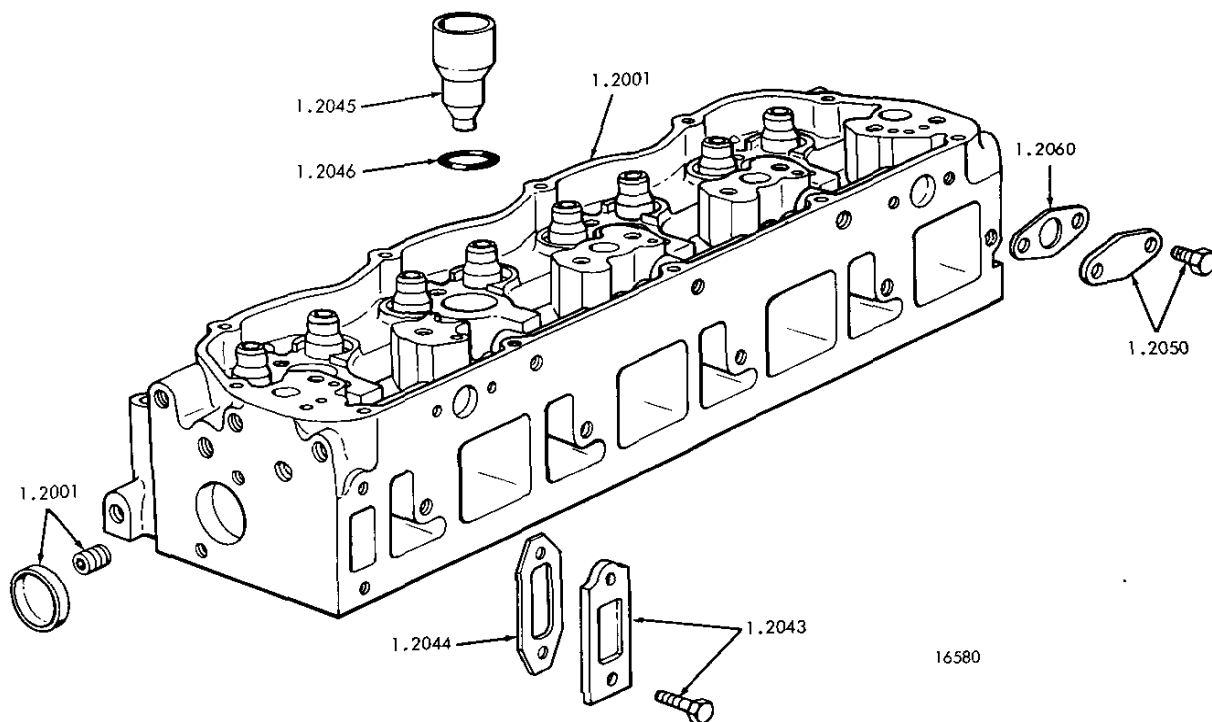
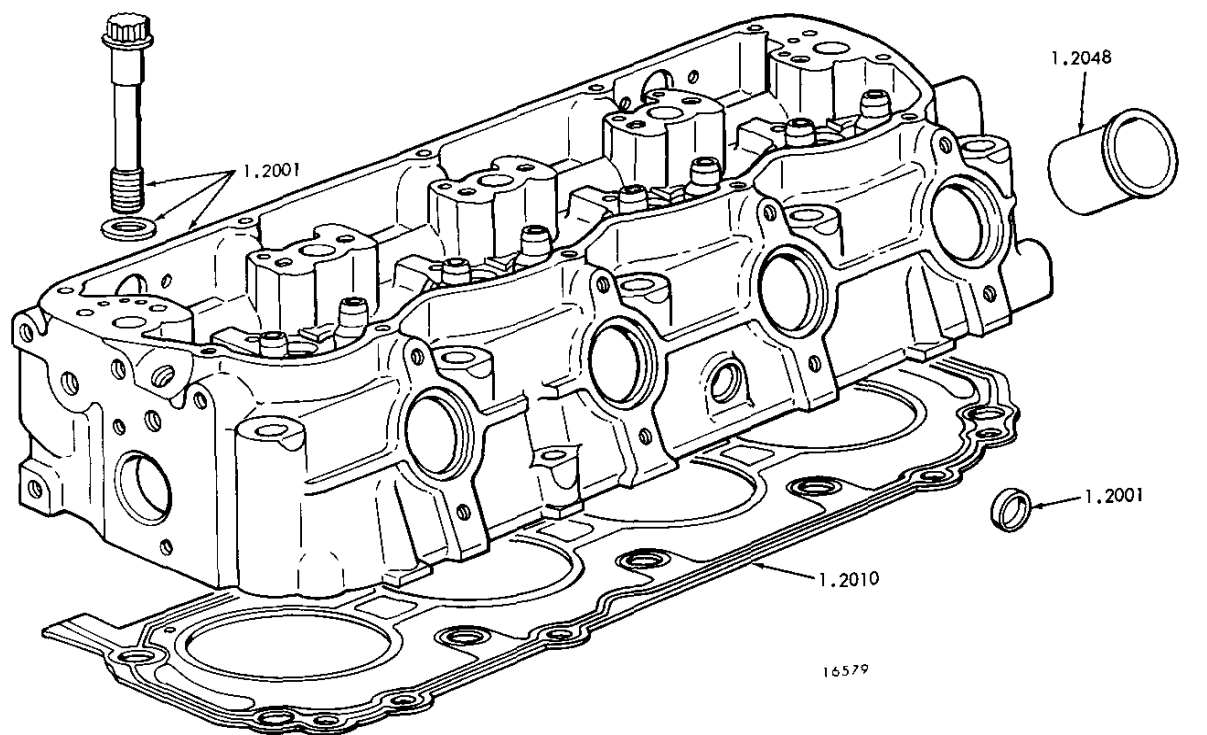


FIG. 2A CYLINDER HEAD

Fig. 2A of 1.0000

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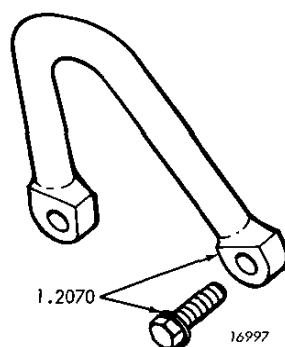


FIG. 2B ENGINE LIFTER BRACKET

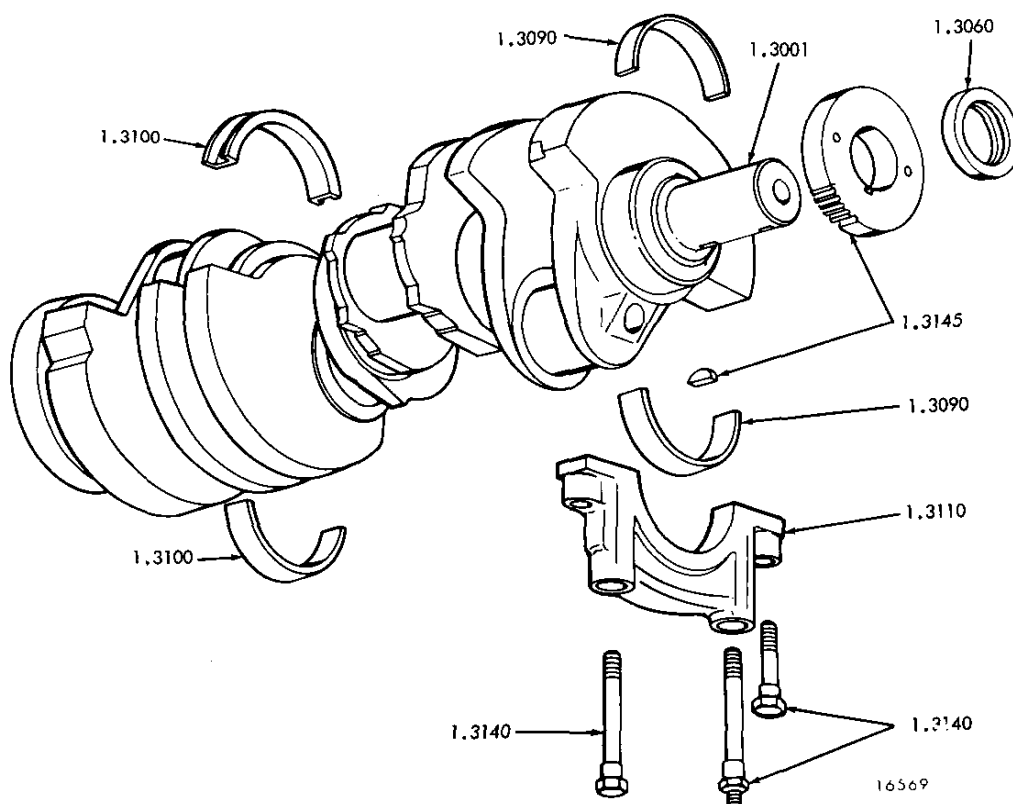


FIG. 3A CRANKSHAFT

Figs. 2B &amp; 3A of 1.0000

Jan., 1980

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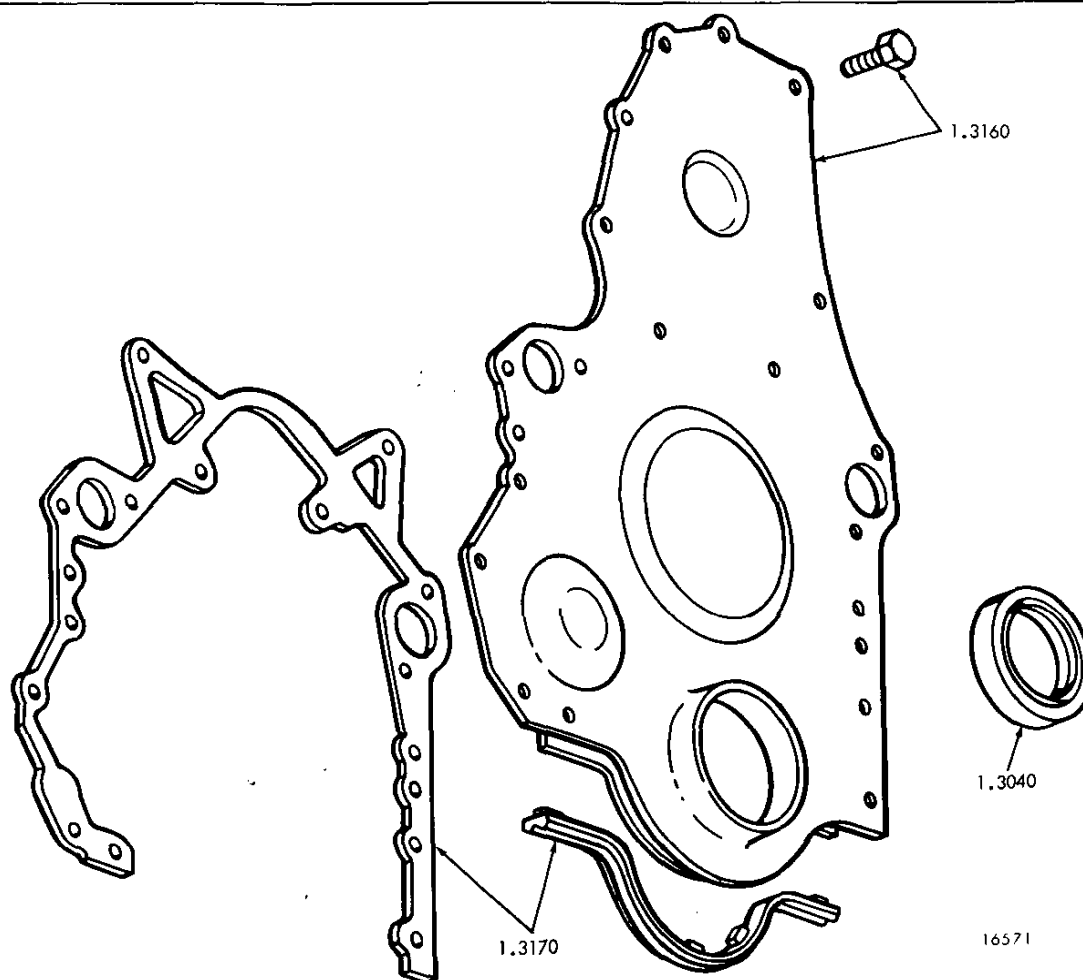


FIG. 4A ENGINE FRONT COVER

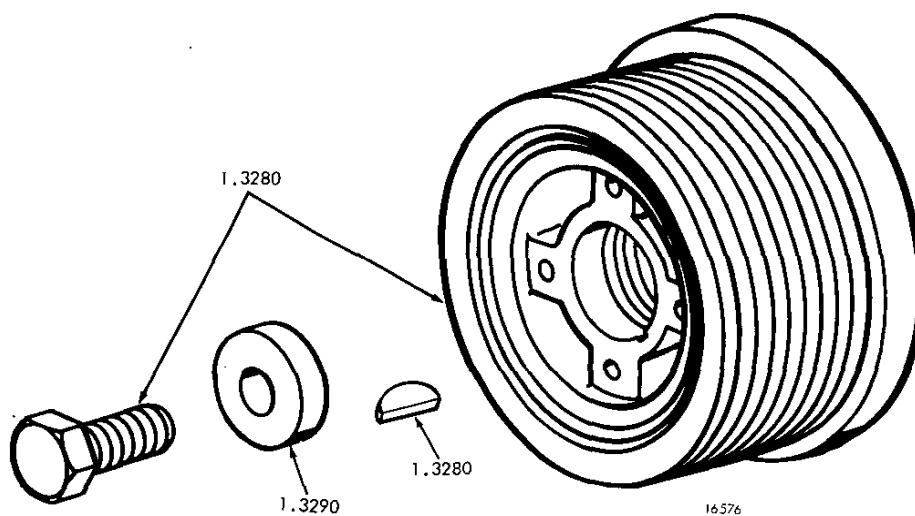


FIG. 4F CRANKSHAFT PULLEY

Figs. 4A &amp; 4F of 1.0000

Oct., 1979

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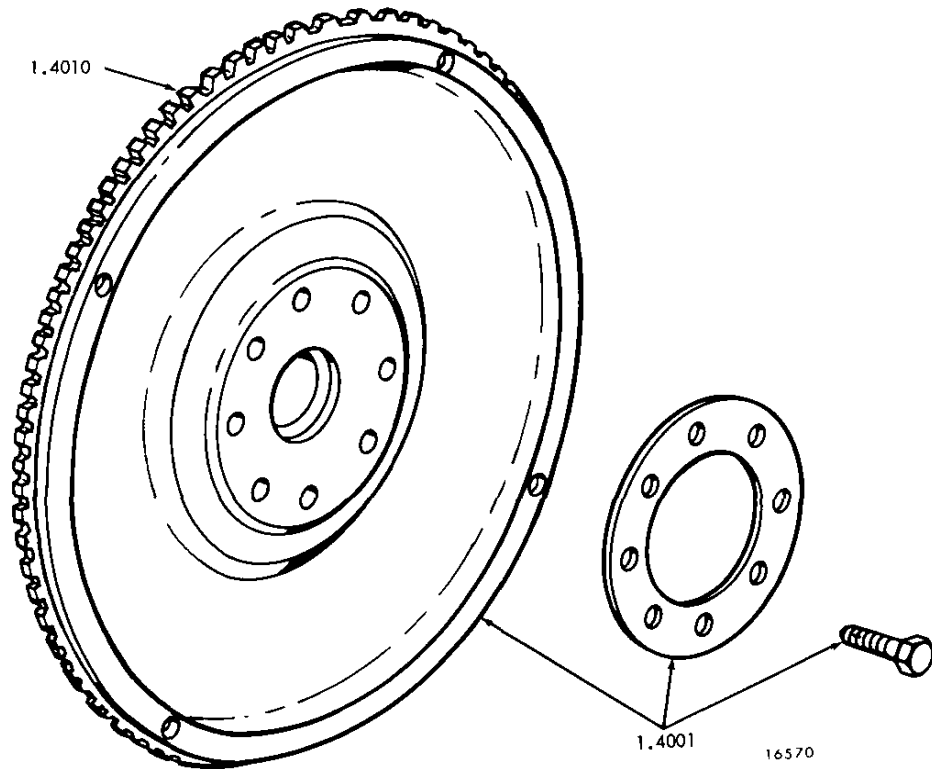


FIG. 5A FLYWHEEL

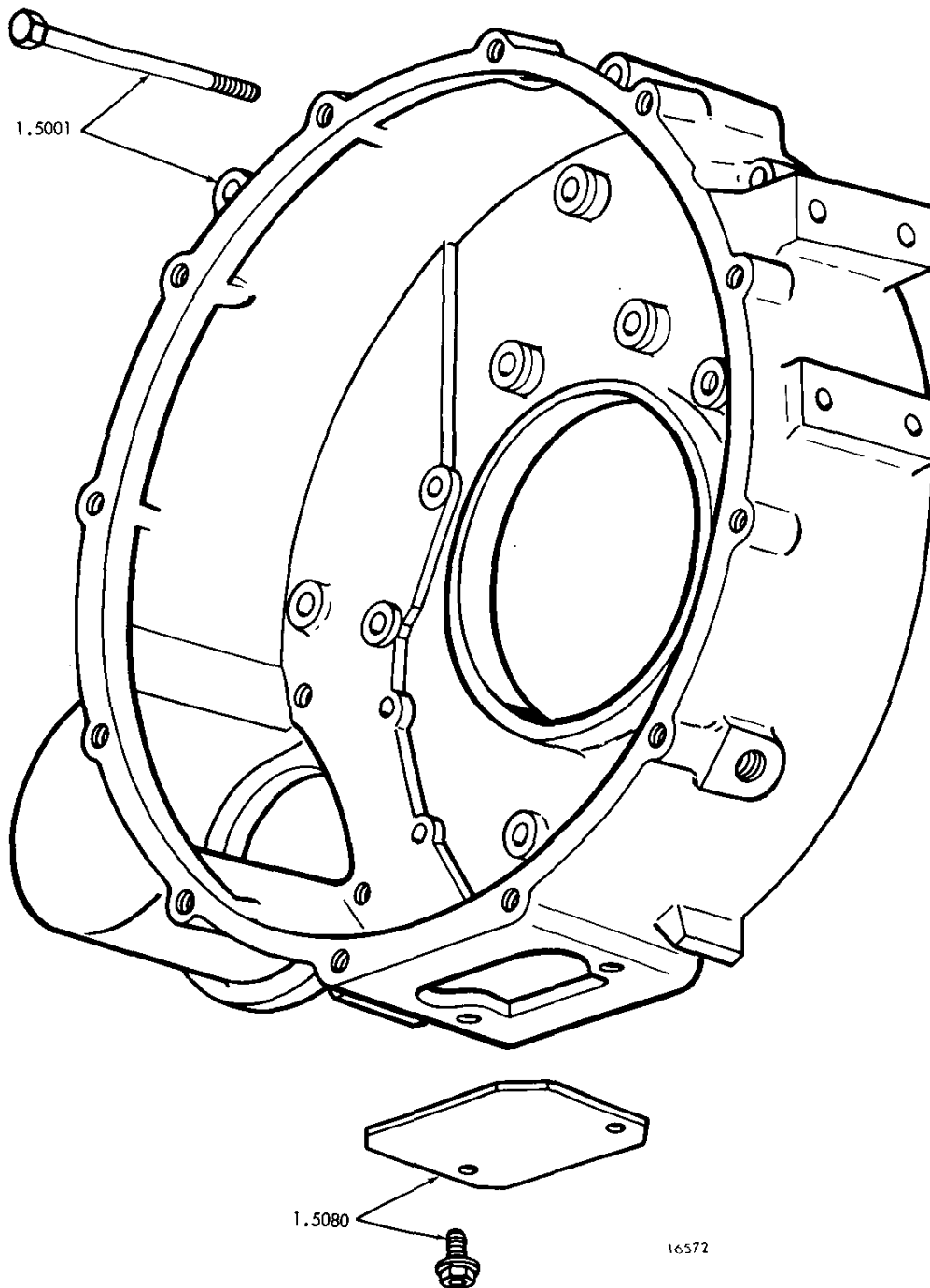


FIG. 5C FLYWHEEL HOUSING

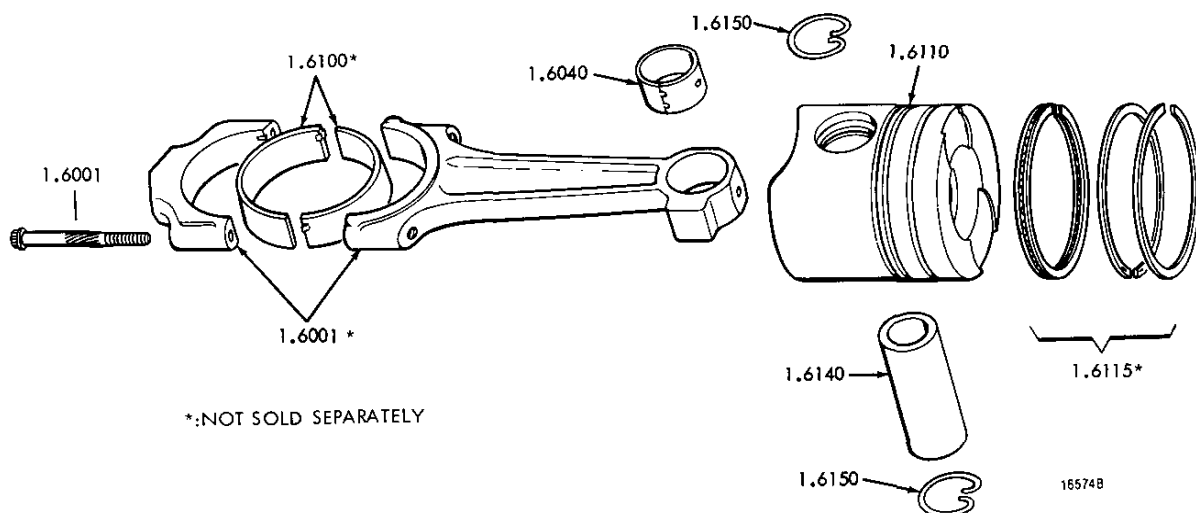


FIG. 6A CONNECTING ROD AND PISTON

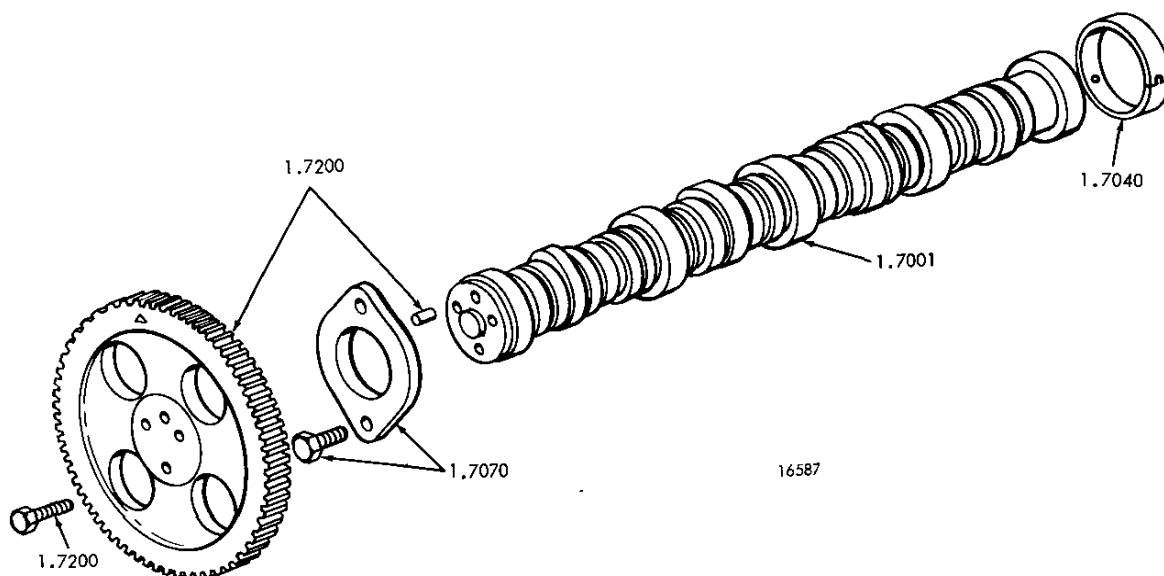


FIG. 7A CAMSHAFT AND GEAR

Figs. 6A &amp; 7A of 1.0000

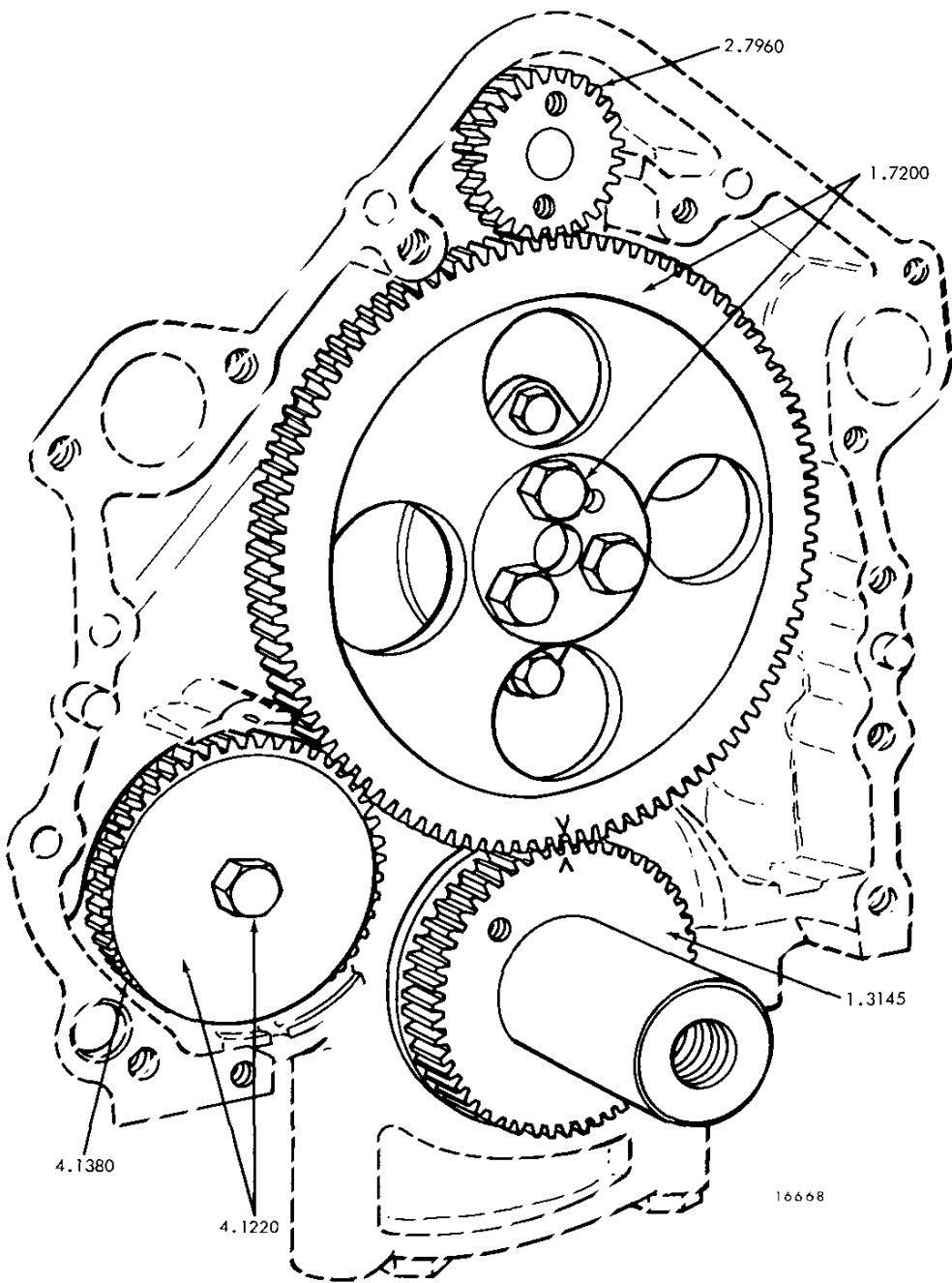


FIG. 7C GEAR TRAIN

Fig. 7C of 1.0000

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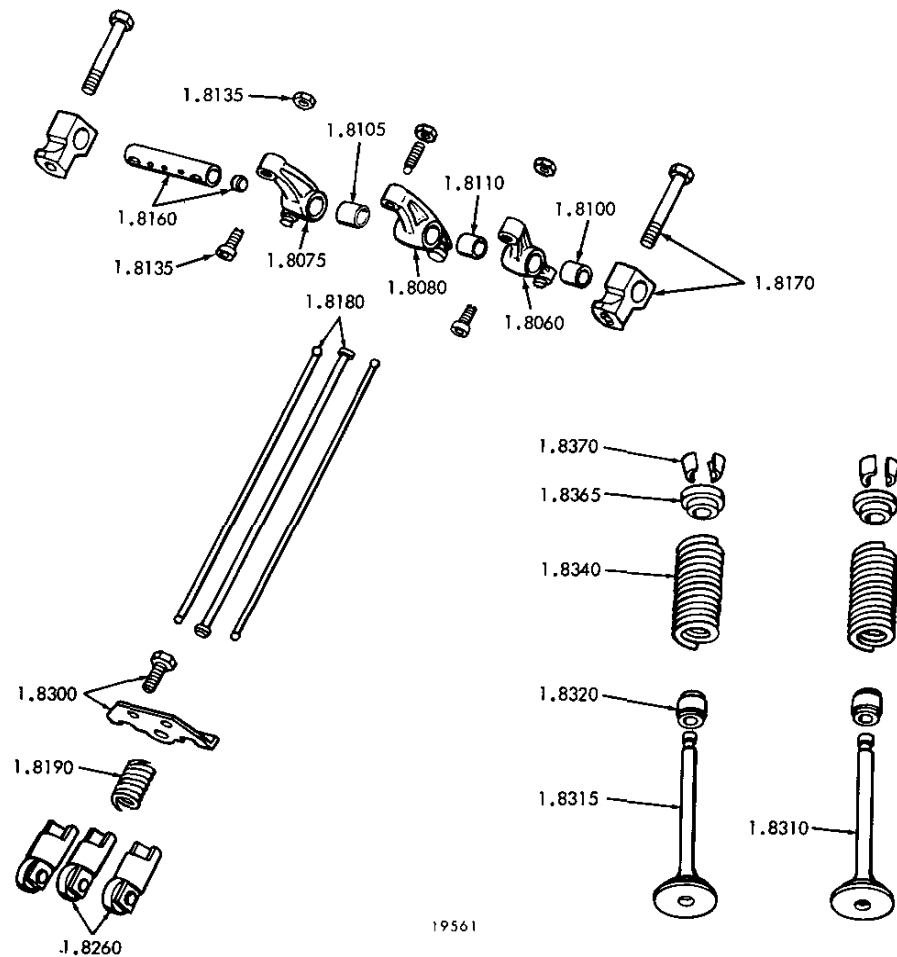


FIG. 9A VALVE OPERATING MECHANISM

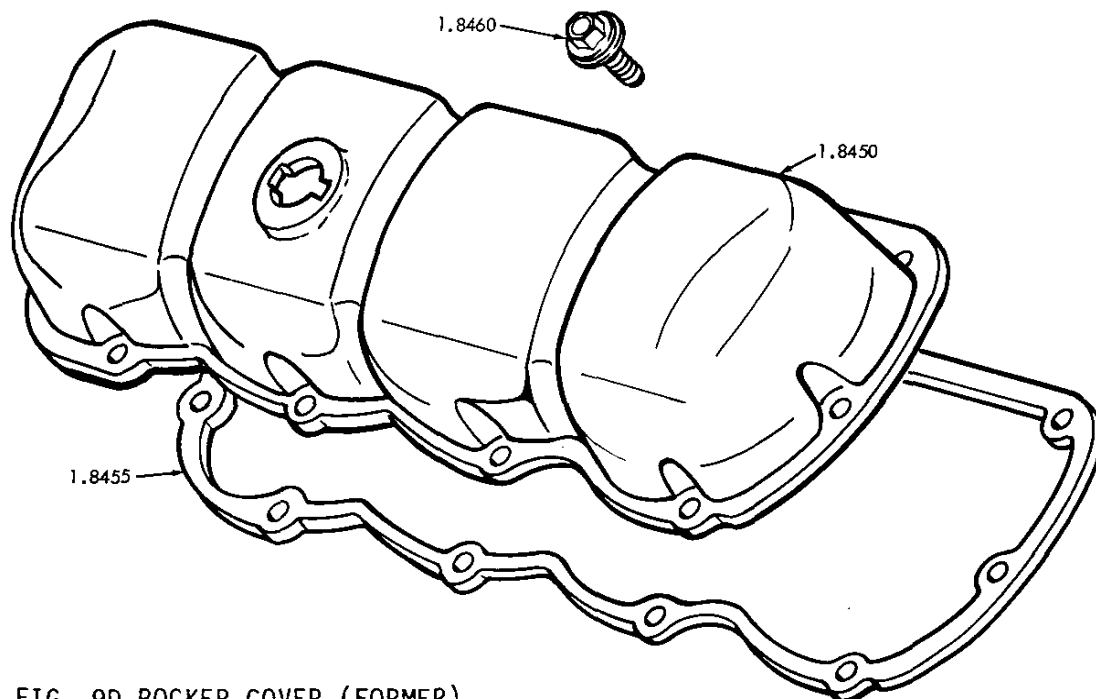


FIG. 9D ROCKER COVER (FORMER)

16583A

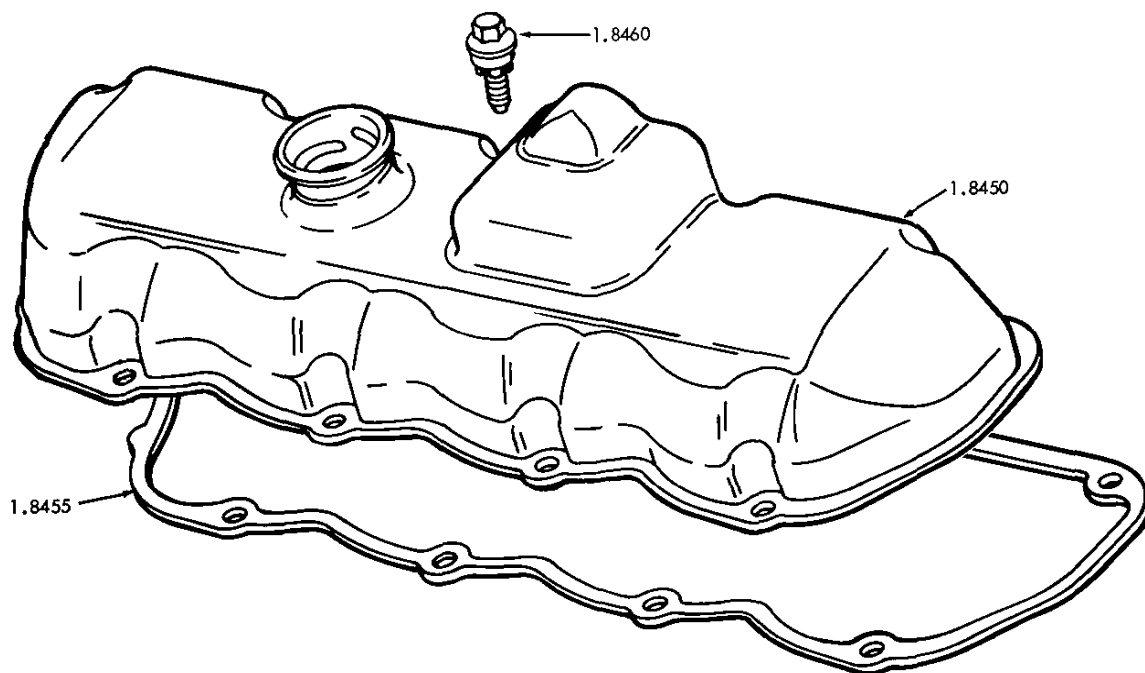
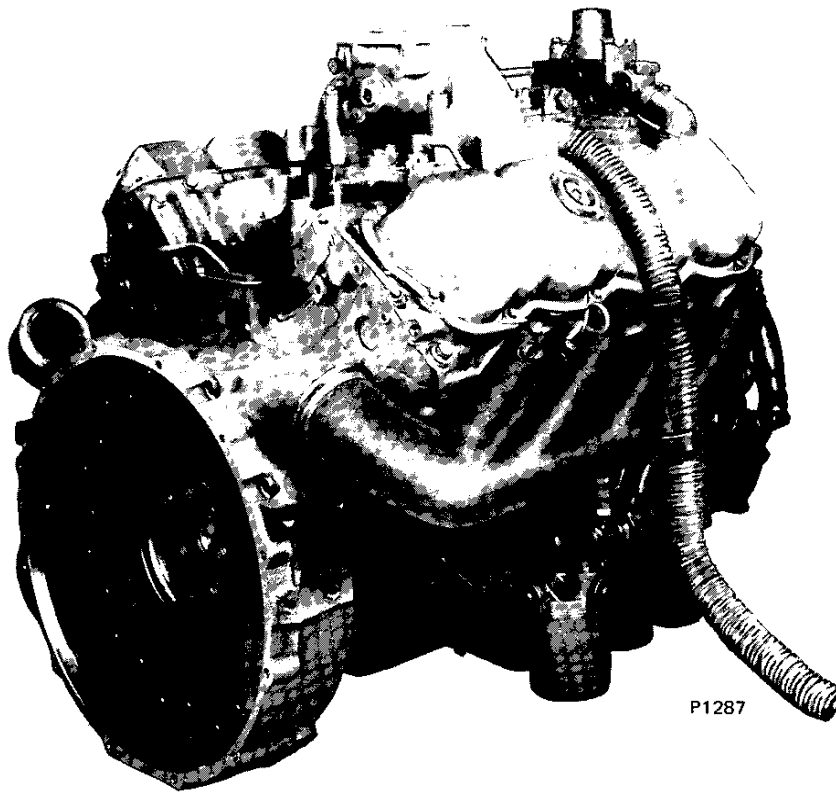


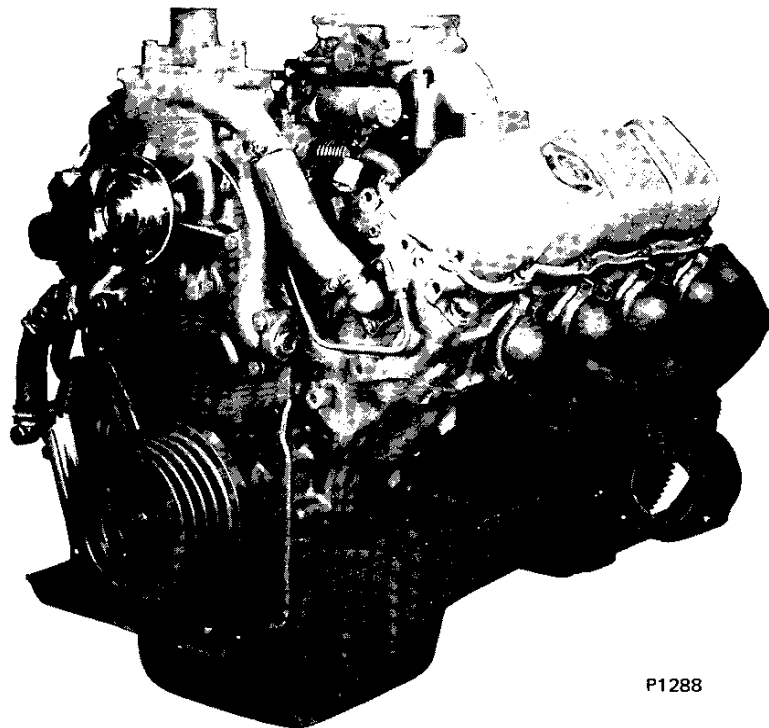
FIG. 9E ROCKER COVER W/BREATHER (CURRENT)

D-44

Figs. 9D &amp; 9E of 1.0000



P1287



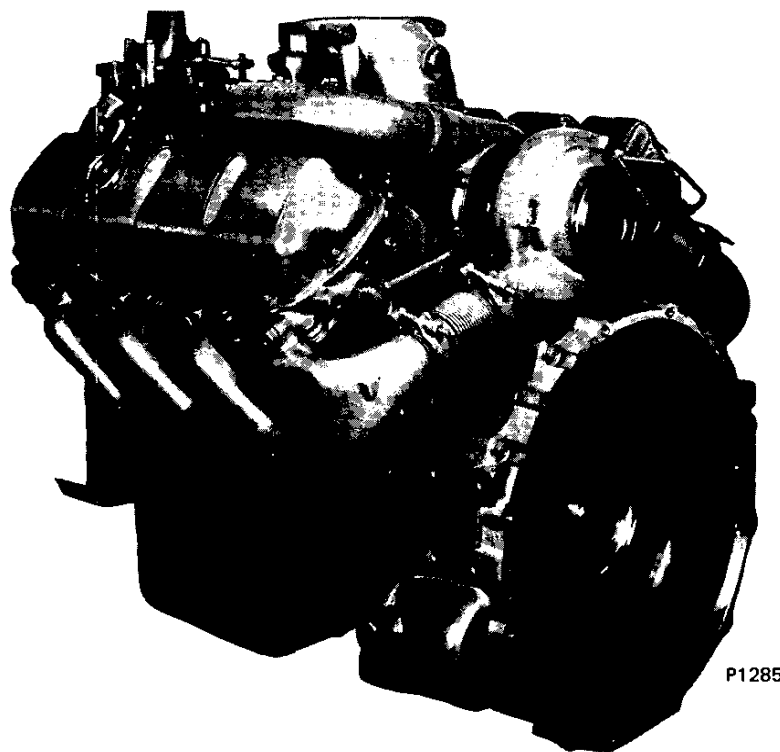
P1288

NATURALLY ASPIRATED FUEL PINCHER ENGINE

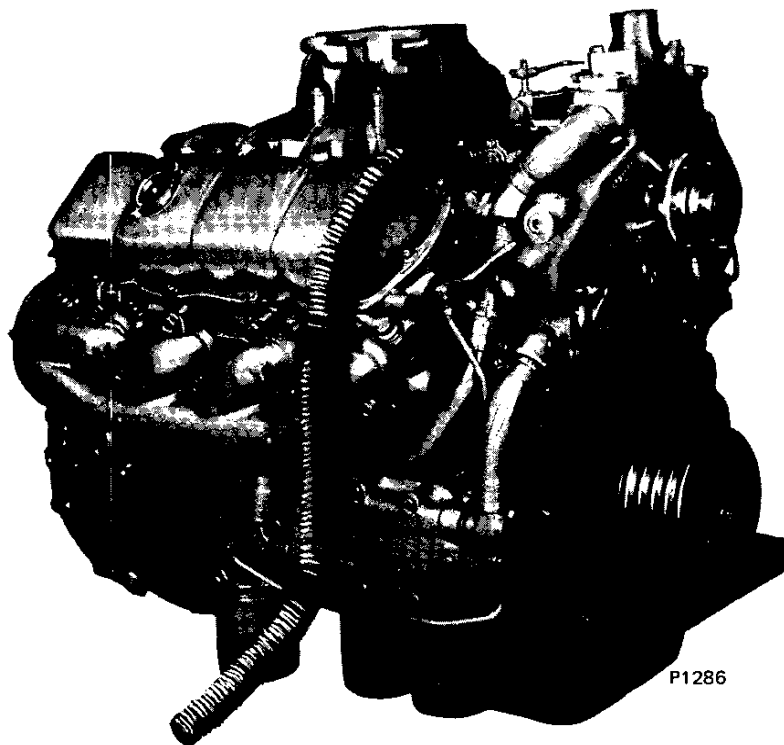
Fig. 10A of 1.0000

May, 1982

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P1285



P1286

TURBOCHARGED FUEL PINCHER ENGINE

Fig. 10B of 1.0000

May, 1982

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## 1.1000 CYLINDER BLOCK

TYPES

PART  
..FIG ... NUMBER ..... NAME AND DESCRIPTION .....

## 1.1001 - BLOCK, CYLINDER

FOR COMPONENTS OF CYLINDER BLOCK  
ASSEMBLIES REFER TO ASSEMBLY  
BREAKDOWN PAGE INDICATED.

1A	<b>8921470</b>	+ BLOCK ASSY. (A1) .....	1
	<b>8924787</b>	BLOCK ASSY., SHORT (NON-TURBO) (B1) .....	AR
	<b>8924786</b>	BLOCK ASSY., SHORT (TURBO) (B1) .....	AR
	<b>8924140</b>	DRAINCOCK, 1/4" (12.9510) .....	1
1A	<b>8920062</b>	PIN, DOWEL 12 MM X 29 MM .....	8
3A	<b>8920422</b>	BOLT, M14 X 2.0 X 133.0 MM .....	1
		+ WHEN ORDERING A REPLACEMENT BLOCK, INCLUDE (8) 8920062 DOWEL PIN AND (1) 8920422 BOLT.	

## 1.1002 - GASKET KIT, ENGINE OVERHAUL

A GASKET KIT CONSISTS OF THE  
NECESSARY GASKETS FOR ONE  
COMPLETE ENGINE OVERHAUL.

<b>8924126</b>	GASKET KIT, TURBO .....	AR
<b>8924117</b>	GASKET KIT, NON TURBO .....	AR

## 1.1037 - LINER, CYLINDER

<b>8924716</b>	SLEEVE, CYLINDER .....	AR
----------------	------------------------	----

## 1.1055 - COVER, CYLINDER BLOCK VALLEY

1B	<b>8920674</b>	COVER (INCLUDES BREATHER HOLE) .....	1
	<b>8924383</b>	COVER ASSY. (INCLUDES REINFORCEMENTS AND BREATHER HOLE) .....	1
	<b>8925369</b>	* COVER ASSY. (PLAIN) .....	1
1B	<b>8920248</b>	REINFORCEMENT (END) .....	2
1B	<b>8920460</b>	WASHER (BEVELED-SQUARE) .....	4
1B	<b>11504471</b>	BOLT, M8 X 1.25 X 25.0 MM FLANGED (12.9001) .....	4
		* EFF. WITH 8G-115922 FOR NON-TURBO ENGINES AND 8G-116264 FOR TURBO ENGINES.	

## 1.1057 - GASKET, CYLINDER BLOCK VALLEY COVER

1B	<b>8920220</b>	GASKET (FRONT END) .....	1
1B	<b>8920246</b>	GASKET (REAR END) .....	1
1B	<b>8920219</b>	SEAL (SIDE 552.0 MM L.) .....	2

## 1.1082 - COVER, CYLINDER BLOCK TURBO MOUNTING HOLE

1A	<b>8920070</b>	COVER (1.1082) .....	1
1A	<b>8923184</b>	SEAL (3.5001) .....	1
1A	<b>8922228</b>	BOLT, M10X1.5X25.0 MM (12.9001) .....	2

## 1.1000 CYLINDER BLOCK

PART  
..FIG .. NUMBER ..... NAME AND DESCRIPTION .....

COLUMN

## 1.1001 - BLOCK, CYLINDER

1A	8921470	BLOCK ASSY. (8V) .....	1
	8922093	BUSHING, OIL PUMP (4.1050) .....	1
3A	8920064	CAP, MAIN BEARING (1.3110) .....	5
3A	8922200	BOLT, MAIN BEARING M12 X 1.75 X 70.0 MM (1.3140) .....	10
3A	8920061	BOLT, MAIN BEARING M14 X 2.0 X 133.0 MM (1.3140) .....	10
	8924380	PLUG, 1/8" PIPE (12.9550) .....	1
1A	5121182	PLUG, 1/4" PIPE (2.4015) .....	1
	8924141	PLUG, 1/4" PIPE (12.9550) .....	1
1A	5115214	PLUG, 1/2" PIPE (12.9550) .....	2
	5103186	PLUG, 1/2" PIPE (12.9550) .....	2
	5103187	PLUG, 3/4" PIPE (12.9550) .....	1
1A	9427695	PLUG, 3/4" CUP (12.9320) .....	3
	5142549	PLUG, 3/4" PIPE (12.9550) .....	1
	9427694	PLUG, 1 1/16" CUP (12.9320) .....	1
1A	9427469	PLUG, 1 1/2" CUP (12.9320) .....	4
1A	9427702	PLUG, 1 5/8" CUP (12.9320) .....	2
	141234	PLUG, 3/8" (12.9550) .....	1

. COLUMN

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## 1.1000 CYLINDER BLOCK

PART  
..FIG ... NUMBER ..... NAME AND DESCRIPTION .....

COLUMN

1.1001 - BLOCK, CYLINDER  
(CONT'D)

	A	B
8921203 HUB (4.1380) .....	1	1
8920407 SPRING, OIL PRESSURE REGULATOR (4.1690) .....	2	2
8920463 VALVE, OIL PRESSURE REGULATOR (4.1700) .....	2	2
8920405 PLUG, OIL PRESSURE RELIEF (4.1715) .....	2	2
5575086 GASKET, OIL PRESSURE REGULATOR PLUG (4.2489) .....	2	2
18SP228 INSTRUCTION, CLEANING .....	1	1



## 1.2000 CYLINDER HEAD

PART			TYPES				
FIG	NUMBER	NAME AND DESCRIPTION	1 5 3	1 5 5	1 6 9	1 7 0	2 1 4
1.2001 - HEAD ASSY., CYLINDER							
FOR COMPONENTS OF CYLINDER HEAD ASSEMBLY REFER TO ASSEMBLY BREAKDOWN PAGE A1.							
2A	8922929	HEAD ASSY. (8V)	2	2			2
	8926670	HEAD ASSY. (8V)			2	2	
	8924749	* PLUG, 1/8" PIPE (12.9550)				2	
2A	8924141	PLUG, 1/4" PIPE (12.9550)	4				4
2A	8923847	PLUG, 1/4" PIPE (4.7001)		5	6	5	
2A	9421744	PLUG, 7/16" DIA. CUP (12.9320)	1	1		1	1
2A	5139991	PLUG, 1 1/2" DIA. CUP (1.1001)	1		1		1
2A	8921378	BOLT, M15 X 2.0 X 130.0 MM 12 PT. HD. (12.9005)	10	10	10	10	10
2A	8921377	BOLT, M14 X 2.0 X 160.0 MM 12 PT. HD. (12.9005)	10	10	10	10	10
	8921876	WASHER, 25.4 MM O.D. (12.9190) * INSTALLED IN CENTER OF EACH CYLINDER HEAD FOR TURBO APPLICATIONS EXCLUDING MARINE ENGINES.	20	20	20	20	20
1.2002 - GASKET KIT, CYLINDER HEAD OVERHAUL							
CONSISTS OF ALL GASKETS NECESSARY TO REPLACE ONE CYLINDER HEAD.							
	8924127	GASKET KIT, TURBO		AR			AR
	8924509	* GASKET KIT, TURBO		AR			AR
	8924118	GASKET KIT, NON-TURBO	AR				AR
	8924508	* GASKET KIT, NON-TURBO * CONSISTS OF ALL GASKETS NECESSARY TO REPLACE BOTH CYLINDER HEADS.	AR				AR
1.2010 - GASKET, CYLINDER HEAD COMPRESSION							
2A	8923848	GASKET	2	2	2	2	2
1.2043 - COVER, CYLINDER HEAD WATER HOLE							
2A	8920250	COVER	1	1	1	1	1
2A	11500716	BOLT, M8 X 1.25 X 25.0 MM (12.9001)	2	2	2	2	2
1.2044 - GASKET, CYLINDER HEAD WATER HOLE COVER							
2A	8920083	GASKET	1	1	1	1	1
1.2045 - TUBE, INJECTOR HOLE							
2A	5149724	TUBE KIT (INCLUDES SEAL RING IN 1.2046)	8	8	8	8	8
1.2046 - RING, INJECTOR HOLE TUBE SEAL							
2A	8920390	RING (PART OF KIT IN 1.2045)	4	4	4		4

## TYPES

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## 1.2000 CYLINDER HEAD

PART  
..FIG .. NUMBER ..... NAME AND DESCRIPTION .....

COLUMN

## 1.2001 - HEAD ASSY., CYLINDER

			A	B																
2A	8922929	HEAD ASSY. (8V) .....	1																	
	8926670	HEAD ASSY. (8V) .....		1																
2A	5149724	TUBE KIT, INJECTOR HOLE (INCLUDES 8920390 SEAL RING) (1.2045) .....	4	4																
2A	8920390	SEAL, RING (1.2046) .....	4	4																
	8924749	* PLUG, 1/8" PIPE (12.9550) .....		AR																
2A	9427698	PLUG, 1" DIA. CUP (12.9320) .....	1	1																
2A	5139991	PLUG, 1 1/2" DIA. CUP (1.1001) .....	1	1																
		* NOT PART OF ASSY.; INSTALLED IN CENTER OF CYLINDER HEAD FOR TURBO APPLICATIONS EXCLUDING MARINE ENGINES.																		

## . TYPES

2		2
1		2
4		5
	2	
		1
	1	
	3	
	2	2
4		
	3	2
	2	
	3	
		2
	2	2
	4	4
	4	4

2B	<b>8921221</b>	BRACKET .....
	<b>8924521</b>	BRACKET .....
	<b>8924298</b>	BRACKET .....
	<b>11500714</b>	BOLT, M8X1.25X20.0 MM (12.9001) .....
	<b>11500724</b>	BOLT, M10X1.50X30.0 MM (12.9001) .....
	<b>11505281</b>	BOLT, M10X1.50X30.0 MM (11.1070) .....
2B	<b>8920419</b>	BOLT, M10 X 1.5 X 45.0 MM SPL. ....
	<b>11500191</b>	LOCKWASHER, M8 (12.9200) .....
	<b>11500192</b>	LOCKWASHER, M10 (12.9200) .....
	<b>11501066</b>	NUT, M8X1.25 (12.9190) .....

8924269	BRACKET .....
11505281	BOLT, M10 X 1.50 X 30 MM (11.1070) .....
5132147	WASHER, 13/32"X1.06"X.20" (3.4030) .....

## 1.3000 CRANKSHAFT, OIL SEALS AND STABILIZERS

PART		NAME AND DESCRIPTION	TYPES											
FIG	NUMBER		7	4	8	2								
1.3001 - CRANKSHAFT ASSY.														
3A	8920193	+ CRANKSHAFT	1											
3A	8922124	CRANKSHAFT			1									
		+ NOT SERVICED, USE 8922124 CRANKSHAFT AND TO INSURE INTERCHANGEABILITY (1) FLYWHEEL ASSY. 8922128, 8922129 OR 8922109 (1) FLEX PLATE 23013495 OR 23013496 AND (1) SCUFF PLATE 8922125 MUST BE USED.												
1.3040 - SEAL, CRANKSHAFT OIL-FRONT														
4A	8920200	SEAL (SINGLE LIP)	1		1									
1.3060 - SEAL, CRANKSHAFT OIL-REAR														
	8923654	SEAL (SINGLE LIP O.S. USE WITH 8923655 SLEEVE)	AR		1									
3A	8921301	SEAL (SINGLE LIP, STD.)	1											
1.3066 - SLEEVE, CRANKSHAFT REAR OIL SEAL														
	8923655	SLEEVE (WITH OVERSIZE SEAL)	AR		1									
1.3090 - SHELL, CRANKSHAFT MAIN BEARING														
		A SHELL SET CONSISTS OF ONE UPPER AND ONE LOWER BEARING SHELL.												
3A	8921712	SHELL SET (STD.)	4		4									
	8922948	SHELL SET, REAR (STD.)	1		1									
3A	8924704	SHELL SET (.010" U.S. I.D.)	AR		AR									
	8924705	SHELL SET, REAR (.010" U.S. I.D.)	AR		AR									
1.3110 - CAP, CRANKSHAFT MAIN BEARING														
	8921778	CAP (FINISHED)	5		5									
3A	8920064	CAP (SEMI FINISHED)	5		5									
1.3140 - BOLT, CRANKSHAFT MAIN BEARING CAP														
3A	8922200	BOLT, M12 X 1.75 X 70.0 MM	10		10									
3A	8920061	BOLT, M14 X 2.0 X 133.0 MM	9		9									
3A	8920422	BOLT, M14 X 2.0 X 133.0 MM	1		1									
1.3145 - GEAR, CRANKSHAFT TIMING														
3A,7C	8920175	GEAR (R.H. ROTATION)	1		1									
3A	5153914	KEY, 1/4" X 1" WOODRUFF (1.7140)	1		1									

PART			TYPES			
FIG	NUMBER	NAME AND DESCRIPTION	1 3 3	1 3 7	1 4 2	1 4 3
<b>1.3160 - COVER, CRANKSHAFT FRONT</b>						
4A	<b>8920274</b>	COVER	1			1
4A	<b>8922788</b>	COVER		1		1
4A	<b>8924647</b>	COVER			1	3
4A	<b>11500714</b>	BOLT, M8X1.25X20.0 MM (12.9001)	3	3	3	2
	<b>8922228</b>	BOLT, M10X1.25X25.0 MM (12.9001)				
<b>1.3170 - GASKET, CRANKSHAFT FRONT COVER</b>						
4A	<b>8920273</b>	GASKET	1	1	1	1
4A	<b>8923090</b>	SEAL	1			
	<b>8925360</b>	* ADAPTOR, OIL PAN SEAL (4.7030)	1			
		* FOR USE WITH ISOLATED OIL PAN 8922782 AND OLD STYLE FRONT COVER 8922074.				

## 1.3000C CRANKSHAFT PULLEY

PART  
FIG . . . NUMBER . . . . . NAME AND DESCRIPTION . . . . .

TYPES

3  
7  
0

## 1.3280 - PULLEY, CRANKSHAFT

4F 8921002 PULLEY ASSY. (199.6" DIA., 4  
GROOVES) . . . . . 1  
4F 5153914 KEY, 1/4"X1" WOODRUFF (1.7140) . . . . . 1

## 1.3290 - RETAINER, CRANKSHAFT PULLEY

4F 8920098 RETAINER (WASHER) . . . . . 1  
4F 11504740 BOLT, M20X2.5X60.0 MM . . . . . 1

## 1.4000A FLYWHEEL

PART  
 .FIG . . . NUMBER . . . . . NAME AND DESCRIPTION . . . . .

TYPES

## 1.4001 - FLYWHEEL ASSY.

INCLUDES GEAR IN 1.4010 NOTE: ALL  
 FLYWHEEL ASSYS. ARE CHAMFERED.

NPN		TYPES										
5A	8920432	@ FLYWHEEL ASSY. (CUSTOMER FURNISHED)	1									1
5A	8920434	% FLYWHEEL ASSY. (SAE #3)		1								
5A	8920466	\$ FLYWHEEL ASSY. (SAE #2)			1							
5A	8921822	FLYWHEEL ASSY. (SAE #2)				1						
5A	8923129	FLYWHEEL ASSY. (SAE #3)				1						
5A	8924829	FLYWHEEL ASSY. (SAE #3)					1					
5A	8924830	FLYWHEEL ASSY. (SAE #3)						1				
5A	8924887	FLYWHEEL ASSY. (SAE #3)							1			
5A	8925016	FLYWHEEL ASSY. (SAE #3)								1		
5A	8926430	FLYWHEEL ASSY. (SAE #2)									1	
5A	8922125	* PLATE, SCUFF	1	1	1		1	1				
5A	8920177	# PLATE, SCUFF	1	1	1							
5A	8922546	WASHER, 22.0 MM X 15.0 MM I.D.				8		8		8	8	
5A	8922547	BOLT, M12X1.75X55.0 MM W/NYLON PATCH				8		8		8	8	
5A	8921862	BOLT, M12 X 1.75 X 83.0 MM (W/NYLON PATCH)		8								
5A	8920162	BOLT, M12 X 1.75 X 50.0 MM (W/NYLON PATCH)	8		8		8				8	
		@ NOT SERVICED, USE 8922128 FLYWHEEL ASSY. AND TO INSURE INTERCHANGEABILITY USE (1) 8922124 CRANKSHAFT AND (1) 8922125 SCUFF PLATE.										
		% NOT SERVICED, USE 8922129 FLYWHEEL ASSY. AND TO INSURE INTERCHANGEABILITY USE (1) 8922124 CRANKSHAFT, (1) 23013495 FLEX PLATE AND (1) 8922125 SCUFF PLATE.										
		\$ NOT SERVICED, USE 8922109 FLYWHEEL ASSY. AND TO INSURE INTERCHANGEABILITY USE (1) 8922124 CRANKSHAFT, (1) 23013496 FLEX PLATE AND (1) 8922125 SCUFF PLATE.										
		# MUST BE USED WITH CRANKSHAFT 8920193.										
		* MUST BE USED WITH CRANKSHAFT 8922124.										

## 1.4010 - GEAR, FLYWHEEL RING

NOTE: ALL RING GEARS ARE CHAMFERED.

5A	5116302	GEAR (138 TEETH)	1		1	1						1
5A	5116301	GEAR (126 TEETH)		1			1	1	1	1		

## 1.4085 - PLATE, FLYWHEEL FLEXIBLE COUPLING

8924874	WEIGHT, BALANCE CRANKSHAFT											1
23013496	PLATE, FLEX			1								
23013495	PLATE, FLEX		1									
23017227	PLATE, FLEX											
8925711	PLATE, SCUFF (1.4001)											1
8925712	BOLT, M12X1.75X45 MM (12.9001)											1



## 1.5000A FLYWHEEL, HOUSING

PART		TYPES													
FIG	NUMBER	NAME AND DESCRIPTION	5 9 7	5 9 8	6 3 8	6 5 5									
<b>1.5001 - HOUSING ASSY., FLYWHEEL</b>															
	<b>8920255</b>	& HOUSING (SAE #2)	1												
5C	<b>8922277</b>	HOUSING (SAE #2)	1			1									
5C	<b>8920166</b>	& HOUSING (SAE #3)		1											
5C	<b>8922276</b>	HOUSING (SAE #3)		1											
	<b>8923218</b>	HOUSING (SAE #3)			1										
	<b>8922990</b>	PLUG, TIMING HOLE	1	1											
	<b>8924348</b>	PLUG, TIMING HOLE				1									
	<b>5106899</b>	PLUG, TACH SENSOR HOLE	1	1	1	1									
	<b>5173334</b>	PLUG, 1/2" PIPE (12.9550)			1										
5C	<b>11500426</b>	# BOLT, 10P X 1.5 X 130.0 MM (12.9001)	4	4											
	<b>8924450</b>	BOLT, M10 X 1.5 X 45.0 MM (12.9001)			9										
	<b>8922168</b>	BOLT, M10X1.5X45.0 MM 12 PT. HD. (12.9005)	13	13		13									
	<b>8921426</b>	BOLT, M10 X 1.5 X 45.0 MM 12 PT. HD. (3.1085)			4										
		& NOT SERVICED, USE SECOND HOUSING SHOWN IN SAME TYPE AND INCLUDE 13-8922168 BOLTS.													
		# USED WITH 8920166 OR 8920255 HOUSINGS ONLY.													
<b>1.5010 - GASKET, FLYWHEEL HOUSING</b>															
	<b>8920091</b>	GASKET	1	1	1	1									
<b>1.5080 - COVER, FLYWHEEL HOUSING INSPECTION HOLE</b>															
5C	<b>8921300</b>	COVER	1	1		1									
5C	<b>11500420</b>	BOLT, M6X1.00X16.0 MM (12.9001)	2	2		2									

PART		TYPES	
FIG	NUMBER	NAME AND DESCRIPTION	
<b>1.5130 - ADAPTOR, FLYWHEEL HOUSING</b>			
	<b>8923239</b>	ADAPTOR (111.16 MM I.D.)	1
	<b>8923238</b>	ADAPTOR (209.56 MM I.D.)	1
	<b>8920438</b>	BOLT, M10 X 1.50 X 30.0 MM (2.7001)	11

## 1.6000 CONNECTING ROD AND PISTON

			TYPES									
..FIG	PART NUMBER	NAME AND DESCRIPTION	1 8 8	1 8 9	2 7 1							
		<b>1.6001 - CONNECTING ROD ASSY.</b>										
		QUANTITIES SHOWN ARE PER CYLINDER. A ROD ASSEMBLY INCLUDES CAP WHICH IS NOT SOLD SEPARATELY, PLUS ITEMS IN 1.6001 AND 1.6040.										
6A	<b>8920139</b>	ROD ASSY. ....	1	1	1							
6A	<b>8920087</b>	BOLT, 7/16"-20 X 2.58" ....	2	2	2							
		<b>1.6040 - BUSHING, CONNECTING ROD PISTON PIN</b>										
6A	<b>8920078</b>	BUSHING ....	1	1	1							
		<b>1.6100 - SHELL, CONNECTING ROD BEARING</b>										
		A SHELL SET CONSISTS OF ONE UPPER AND ONE LOWER BEARING SHELL.										
6A	<b>8921714</b>	SHELL SET (STD.) ....	1	1	1							
6A	<b>8924703</b>	SHELL SET (.010" U.S. I.D.) ....	AR	AR	AR							
		<b>1.6110 - PISTON ASSY.</b>										
6A	<b>8921605</b>	PISTON, GRADE A (NON-TURBO; 18.8 TO 1 RATIO, WHITE DOT IDENTIFICATION) (CYL. BORE 108.000-108.016 MM) ....	1									
6A	<b>8922234</b>	PISTON, GRADE B (NON-TURBO; 18.8 TO 1 RATIO, BLACK DOT IDENTIFICATION) (CYL. BORE 108.017-108.033 MM) ....	1									
6A	<b>8922236</b>	PISTON, GRADE C (NON-TURBO; 18.8 TO 1 RATIO, YELLOW DOT IDENTIFICATION) (CYL. BORE 108.034-108.050 MM) ....	1									
	<b>8928520</b>	PISTON, GRADE D (NON-TURBO, 18.8 TO 1 RATIO) (CYL. BORE 108.051-108.067 MM) ....	1									
6A	<b>8925818</b>	PISTON, GRADE A (TURBO; 17.4 TO 1 RATIO, WHITE DOT IDENTIFICATION) (CYL. BORE 108.000-108.016 M M) ....		1								
6A	<b>8925819</b>	PISTON, GRADE B (TURBO; 17.4 TO 1 RATIO, BLACK DOT IDENTIFICATION) (CYL. BORE 108.017-108.033 M M) ....		1								
6A	<b>8925820</b>	PISTON, GRADE C (TURBO; 17.4 TO 1 RATIO, YELLOW DOT IDENTIFICATION) (CYL. BORE 108.034-108.050 MM) ....		1								
	<b>8928521</b>	PISTON, GRADE D (TURBO, 17.4 TO 1 RATIO) (CYL. BORE 108.051-108.067 MM) ....		1								
	<b>8926481</b>	PISTON, GRADE A (TURBO; 16.4 TO 1 RATIO, WHITE DOT IDENTIFICATION) (CYL. BORE 108.000-108.016 MM) ....			1							
	<b>8926482</b>	PISTON, GRADE B (TURBO; 16.4 TO 1 RATIO, BLACK DOT IDENTIFICATION) (CYL. BORE 108.017-108.033 MM) ....			1							
	<b>8926483</b>	PISTON, GRADE C (TURBO; 16.4 TO 1 RATIO, YELLOW DOT IDENTIFICATION) (CYL. BORE 108.034-108.050 MM ) ....			1							

## 1.6000 CONNECTING ROD AND PISTON

PART		TYPES												
..FIG	NUMBER	NAME AND DESCRIPTION	1 8 8	1 8 9	2 7 1									
	<b>1.6110</b>	<b>PISTON ASSY.</b> (CONT'D)												
	<b>8922451</b>	PISTON, .005" O.S. (NON-TURBO; 18.8 TO 1 RATIO)	AR											
	<b>8922452</b>	PISTON, .010" O.S. (NON-TURBO; 18.8 TO 1 RATIO)	AR											
	<b>8922453</b>	PISTON, .020" O.S. (NON-TURBO; 18.8 TO 1 RATIO)	AR											
	<b>8925815</b>	PISTON, .005" O.S. (TURBO; 17.4 TO 1 RATIO)		AR										
	<b>8925816</b>	PISTON, .010" O.S. (TURBO; 17.4 TO 1 RATIO)		AR										
	<b>8925817</b>	PISTON, .020" O.S. (TURBO; 17.4 TO 1 RATIO)		AR										
	<b>8926484</b>	PISTON, .005" O.S. (TURBO; 16.4 TO 1 RATIO)			AR									
	<b>8926485</b>	PISTON, .010" O.S. (TURBO; 16.4 TO 1 RATIO)			AR									
	<b>8926486</b>	PISTON, .020" O.S. (TURBO; 16.4 TO 1 RATIO)			AR									
	<b>1.6115</b>	<b>RING SET, PISTON</b>												
		RING SET CONSISTS OF SUFFICIENT RINGS FOR (1) PISTON.												
	<b>8921721</b>	RING SET (STD.) (NON-TURBO)	1											
	<b>8921722</b>	RING SET (STD.) (TURBO)		1	1									
	<b>8923779</b>	RING SET (.005" O.S.) (NON-TURBO)	1											
	<b>8923780</b>	RING SET (.005" O.S.) (TURBO)		1	1									
	<b>8923917</b>	RING SET (.010" O.S.) (NON-TURBO)	1											
	<b>8923918</b>	RING SET (.010" O.S.) (TURBO)		1	1									
	<b>8923919</b>	RING SET (.020" O.S.) (NON-TURBO)	1											
	<b>8923920</b>	RING SET (.020" O.S.) (TURBO)		1	1									
	<b>1.6140</b>	<b>PIN, PISTON</b>												
6A	<b>8920101</b>	PIN (NON-TURBO AND TURBO)	1	1										
	<b>8925717</b>	PIN (TURBO)			1									
	<b>1.6150</b>	<b>RETAINER, PISTON PIN</b>												
6A	<b>8922977</b>	RING, PISTON RETAINER	2	2	2									

## . TYPES

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## 1.8000 VALVE AND INJECTOR OPERATING MECHANISM

PART		NAME AND DESCRIPTION	TYPES											
FIG	NUMBER		1	2										
			5	1										
			5	4										
		<b>1.8060 - ARM ASSY., EXHAUST VALVE ROCKER</b>												
		AN ARM ASSY. INCLUDES BUSHING IN 1.8100.												
9A	<b>8921149</b>	ARM ASSY. ....	8											
9A	<b>8923829</b>	ARM ASSY. ....		8										
		<b>1.8075 - ARM ASSY., INTAKE VALVE ROCKER</b>												
		AN ARM ASSY. INCLUDES BUSHING IN 1.8105.												
9A	<b>8921148</b>	ARM ASSY. ....	8											
9A	<b>8923827</b>	ARM ASSY. ....		8										
		<b>1.8080 - ARM ASSY., INJECTOR ROCKER</b>												
		AN ARM ASSY. INCLUDES BUSHING IN 1.8110.												
9A	<b>8922172</b>	+ ARM ASSY. ....	8											
9A	<b>8923831</b>	ARM ASSY. ....		8										
		+ NOT SERVICED, USE 8923831.												
		<b>1.8100 - BUSHING, EXHAUST VALVE ROCKER ARM-LARGE</b>												
9A	<b>8923977</b>	BUSHING (1.8110) ....	8	8										
		<b>1.8105 - BUSHING, INTAKE VALVE ROCKER</b>												
9A	<b>8923977</b>	BUSHING (1.8110) ....	8	8										
		<b>1.8110 - BUSHING INJECTOR ROCKER ARM-LARGE</b>												
9A	<b>8923977</b>	BUSHING ....	8	8										
		<b>1.8135 - SCREW, ROCKER ARM ADJUSTING</b>												
9A	<b>8921259</b>	SCREW, M10 X 1.50 X 37.3 MM (INJECTOR) ....	24											
9A	<b>8923845</b>	SCREW, M10 X 1.50 X 37.3 MM (INJECTOR) ....		8										
9A	<b>8923834</b>	SCREW, M12 X 1.0 X 38.6 MM		16										
9A	<b>11501052</b>	NUT, M10 X 1.50 (ROCKER ARM ADJUSTING) ....	24											
9A	<b>8923844</b>	NUT, M10 X 1.50 X 4 (INJECTOR) ....		8										
9A	<b>8923835</b>	NUT, M12 X 1.0 (12.9120) ....		16										

## 1.8000 VALVE AND INJECTOR OPERATING MECHANISM

PART			TYPES													
FIG	NUMBER	NAME AND DESCRIPTION	1	2												
			5	1												
			5	4												
		<b>1.8160 - SHAFT ASSY., ROCKER</b>														
		A SHAFT ASSY. INCLUDES PLUG IN 1.8160.														
9A	<b>8920478</b>	SHAFT ASSY. ....	8	8												
9A	<b>5151272</b>	PLUG ....	8	8												
9A	<b>8924385</b>	+ PLUG ....	8	8												
		+ OPTIONAL TO PLUG 5151272.														
		<b>1.8170 - BRACKET, ROCKER SHAFT</b>														
9A	<b>8920465</b>	BRACKET ....	16													
9A	<b>8923843</b>	BRACKET ....		16												
9A	<b>8920476</b>	BOLT, M10 X 1.50 X 70.0 MM (12 PT. HD.) ....	16	16												
		<b>1.8180 - ROD, PUSH</b>														
9A	<b>8921255</b>	ROD, VALVE ....	16													
9A	<b>8923836</b>	ROD, VALVE ....		16												
9A	<b>8920469</b>	ROD, INJECTOR ....	8	8												
		<b>1.8190 - SPRING, PUSH ROD</b>														
9A	<b>8921253</b>	SPRING ....	8	8												
		<b>1.8260 - FOLLOWER ASSY., CAM</b>														
9A	<b>8923576</b>	FOLLOWER ASSY. (INJECTOR) ....	8	8												
9A	<b>8922962</b>	FOLLOWER ASSY. (VALVE) ....	16	16												
		<b>1.8265 - ROLLER SET, CAM FOLLOWER</b>														
	<b>8923814</b>	ROLLER SET (INJECTOR) ....	AR	AR												
	<b>8923813</b>	ROLLER SET (VALVE) ....	AR	AR												
		<b>1.8300 - GUIDE, CAM FOLLOWER</b>														
9A	<b>8921178</b>	GUIDE ....	8	8												
9A	<b>11504505</b>	BOLT, M8 X 1.25 X 20.0 MM (12.9001) ....	16	16												
		<b>1.8310 - VALVE, EXHAUST</b>														
	<b>5149742</b>	VALVE (INCLUDES LOCKS) (PKG.) ....	8	8												
		<b>1.8315 - VALVE, INTAKE</b>														
	<b>5149743</b>	VALVE (INCLUDES LOCKS) (PKG.) ....	8	8												
		<b>1.8320 - GUIDE, EXHAUST VALVE</b>														
	<b>5199914</b>	INSTALLER, INTAKE AND EXHAUST VALVE SEAL (2 VALVE HEAD) ....	AR	AR												
9A	<b>5100699</b>	SEAL (2 VALVE HEAD) (INTAKE AND EXHAUST) ....	16	16												

## 1.8000 VALVE AND INJECTOR OPERATING MECHANISM

PART		TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	1	2									
			5	1									
			5	4									
		<b>1.8325 - SLEEVE, VALVE GUIDE</b>											
	<b>8922711</b>	SLEEVE (COPPER)	AR	AR									
		<b>1.8340 - SPRING, EXHAUST VALVE</b>											
9A	<b>8921111</b>	SPRING ASSY. (INTAKE AND EXHAUST)	16	16									
		<b>1.8365 - ROTATOR, VALVE</b>											
9A	<b>8922369</b>	ROTATOR (VALVE INTAKE AND EXHAUST)	16	16									
		<b>1.8370 - LOCK, EXHAUST VALVE SPRING</b>											
9A	<b>838029</b>	KEY (INTAKE AND EXHAUST)	32	32									



## 1.8000A ROCKER COVER

PART			TYPES									
..FIG ..	NUMBER .....	NAME AND DESCRIPTION .....	4	4	5							
			5	9	2							
			5	8	3							
<b>1.8450 - COVER ASSY., ROCKER</b>												
9D	<b>8924128</b>	COVER .....	2	2								
9E	<b>8926405</b>	COVER ASSY. (W/BREATHING) .....			2							
<b>1.8455 - GASKET, ROCKER COVER</b>												
9D	<b>8920271</b>	GASKET .....	2	2								
	<b>8926675</b>	GASKET .....			2							
<b>1.8460 - BOLT, ROCKER COVER</b>												
9D	<b>103341</b>	WASHER, 3/8" (12.9190) .....	22									
9D	<b>11504505</b>	BOLT, M8 X 1.25 X 20.0 MM (12.9001) .....	22									
	<b>8926284</b>	BOLT ASSY., M8X1.25X20.0 MM .....		22								
9E	<b>8926674</b>	BOLT & WASHER ASSY., M6X1.0X27.0 MM .....			16							
<b>1.8500 - PLATE, OPTION AND ACCESSORY NAME</b>												
FOR A REPLACEMENT EMISSION LABEL CONTACT YOUR LOCAL DISTRIBUTOR AND PROVIDE ENGINE SERIAL NUMBER.												
	<b>8924820</b>	+ LABEL ASSY., OPTION .....	AR	AR								
	<b>15SP-48</b>	LAMINATE, PLASTIC .....	AR	AR								
	<b>8922329</b>	DECAL, ROCKER COVER (FUEL PINCHER) .....	AR	AR								
	<b>8927763</b>	DECAL, ROCKER COVER (8.2 L DIESEL) .....			AR							
	<b>8924713</b>	DECAL, ROCKER COVER MARINE .....	AR	AR								
+ NOT SERVICED BY DDA. FOR REPLACEMENT LABEL CONTACT YOUR LOCAL DISTRIBUTOR AND PROVIDE ENGINE SERIAL NUMBER.												

## GROUP NOMENCLATURE

1.0000	ENGINE (less major assemblies)	5.0000	COOLING SYSTEM (CONT'D)
1.1000	Cylinder Block	5.4000B	Fan Shroud
1.1000A	Air Box Drains	5.5000A	Heat Exchanger or Keel Cooling
1.2000	Cylinder Head	5.6000A	Raw Water Pump
1.2000A	Engine Lifter Bracket	5.7000A	Water Filter
1.3000	Crankshaft, Oil Seals and Stabilizers		
1.3000A	Crankshaft Front Cover	6.0000	EXHAUST SYSTEM
1.3000B	Vibration Damper	6.1000A	Exhaust Manifold and/or Connections
1.3000C	Crankshaft Pulley	6.2000A	Exhaust Muffler and/or Connections
1.3000D	Crankshaft Pulley Belt		
1.4000A	Flywheel	7.0000	ELECTRICAL--INSTRUMENTS
1.5000A	Flywheel Housing	7.1000A	Battery Charging Generator
1.5000B	Flywheel Housing Adaptor	7.2000A	Battery Cables
1.6000	Connecting Rod and Piston	7.2000B	Automatic Starting
1.7000	Camshaft and Gear Train	7.2000B	Automatic Starting (Twin and Quad)
1.7000A	Balance Weight Cover	7.3000A	Starting Motor
1.7000B	Accessory Drive	7.4000A	Instruments
1.8000	Valve and Injector Operating Mechanism	7.4000A	Instruments (Twin and Quad)
1.8000A	Rocker Cover	7.4000B	Tachometer Drive
		7.4000B	Tachometer Drive (Twin and Quad)
2.0000	FUEL SYSTEM	7.4000C	Shutoff, Alarm and O.S. Governor
2.1000A	Fuel Injector	7.4000C	Shutoff, Alarm and O.S. Governor (Twin and Quad)
2.2000	Fuel Pump	7.5000A	Power Generator
2.2000A	Fuel Pump Drain	7.6000A	Control Cabinet
2.3000A	Fuel Filter and Strainer	7.6000A	Control Cabinet (Twin and Quad)
2.3000A	Fuel Filter and Strainer (Twin and Quad)	7.7000A	Wiring Harness
2.4000	Fuel Manifold and/or Connections	7.8000A	Air Heater
2.4000A	Dual Fuel System	7.8000A	Air Heater (Twin and Quad)
2.5000A	Fuel Lines and Fuel Cooler	7.10000A	Hydraulic Governor Solenoid
2.5000A	Fuel Lines and Fuel Cooler (Twin and Quad)		
2.6000A	Fuel Tank	8.0000	POWER TAKE OFF
2.6000B	Electric Governor	8.1000A	Power Take-off and/or Clutch
2.7000A	Mechanical Governor	8.1000A	Power Take-off and/or Clutch (Twin and Quad)
2.8000A	Hydraulic Governor	8.3000A	Torque Converter
2.9000	Injector Controls	8.3000A	Torque Converter (Twin and Quad)
2.9000	Injector Controls (Twin and Quad)	8.3000B	Transmission Lines
2.9000A	Throttle Controls		
2.9000A	Throttle Controls (Twin and Quad)	9.0000	TRANSMISSION AND PROPULSION
3.0000	AIR SYSTEM	9.1000A	Hydraulic Marine Gear
3.1000A	Air Cleaner and/or Adaptor	9.1000A	Hydraulic Marine Gear (Twin and Quad)
3.2000A	Air Silencer	9.2000A	Reverse and Reduction Gear (mechanical)
3.3000A	Air Inlet Housing	9.3000A	Power Transfer Gear
3.4000	Blower and Drive	9.3000A	Power Transfer Gear (Twin and Quad)
3.4000A	Blower Drive Shaft	9.4000	Transmission--Highway
3.4000B	Blower End Plate Cover	9.7000	Transmission--Off-highway
3.5000A	Turbocharger, Intercooler, and Aftercooler	9.9000	Transmission--Rail Car
4.0000	LUBRICATING SYSTEM	10.0000	SHEET METAL
4.1000A	Oil Pump	10.1000A	Engine Hood
4.1000B	Oil Distribution System		
4.1000C	Oil Pressure Regulator	11.0000	ENGINE MOUNTING
4.2000A	Oil Filter	11.1000A	Engine Mounting and Base
4.3000A	Oil Filter Lines	11.1000A	Engine Mounting and Base (Twin and Quad)
4.4000A	Oil Cooler and Marine Gear Lines		
4.5000A	Oil Filler	12.0000	MISCELLANEOUS
4.6000A	Dipstick	12.2000A	Bilge Pump
4.7000A	Oil Pan	12.3000A	Vacuum Pump
4.8000A	Ventilating System	12.4000A	Air Compressor
5.0000	COOLING SYSTEM	12.5000A	Hydraulic Pump
5.1000	Fresh Water Pump	12.6000A	Gasoline Starter
5.1000A	Fresh Water Pump Cover	12.6000B	Air Starter
5.2000A	Water Outlet Manifold and/or Elbow	12.6000C	Cold Weather Starting Aid
5.2000B	Thermostat	12.6000D	Hydraulic Starter
5.2000C	Water Bypass Tube	12.6000E	Hydraulic Starter Accessories
5.3000A	Radiator	12.8000A	Supplies
5.3000B	Water Connections	12.8000B	Fabrication Material
5.4000A	Fan	12.8000C	Miscellaneous Service Kits and Sets
		12.8000D	Miscellaneous Service Parts

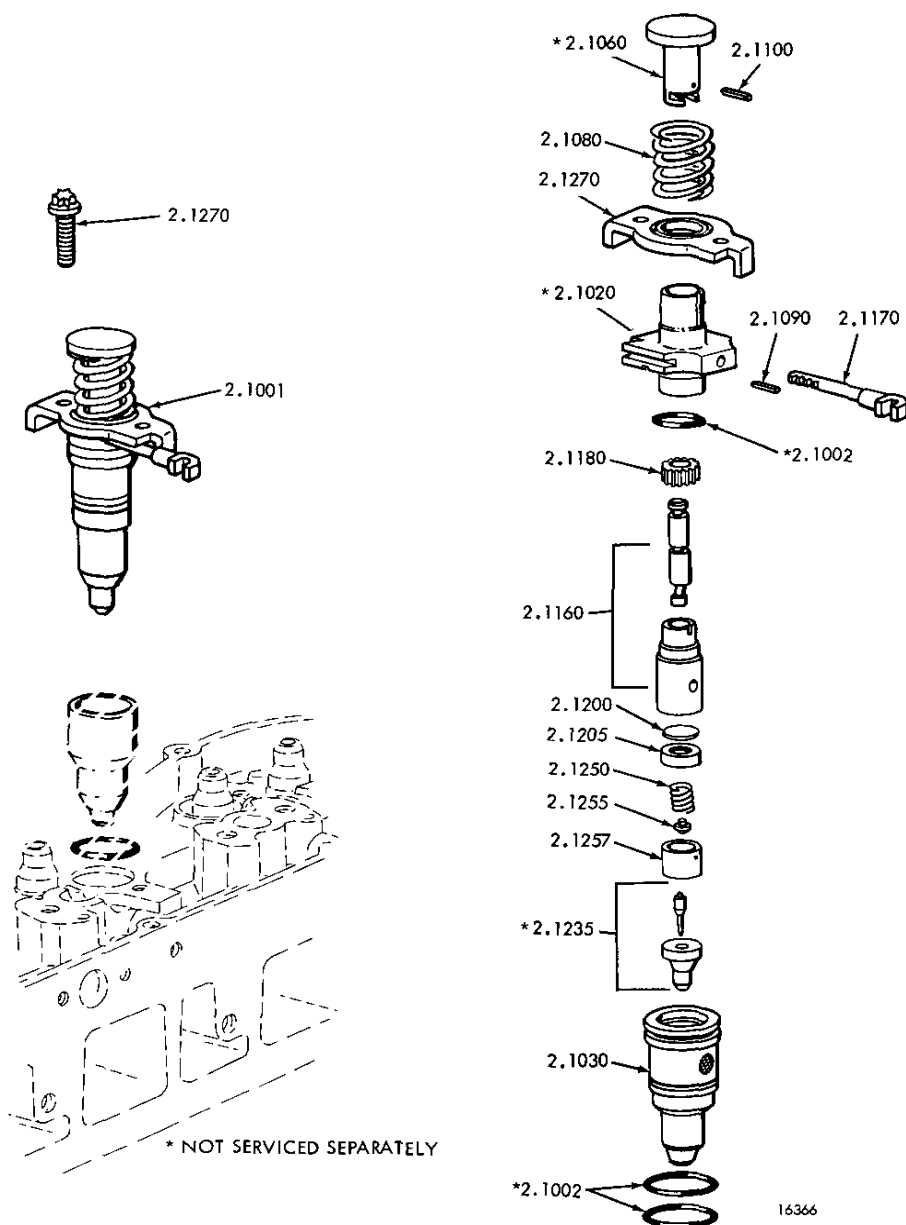


FIG. 1A FUEL INJECTOR

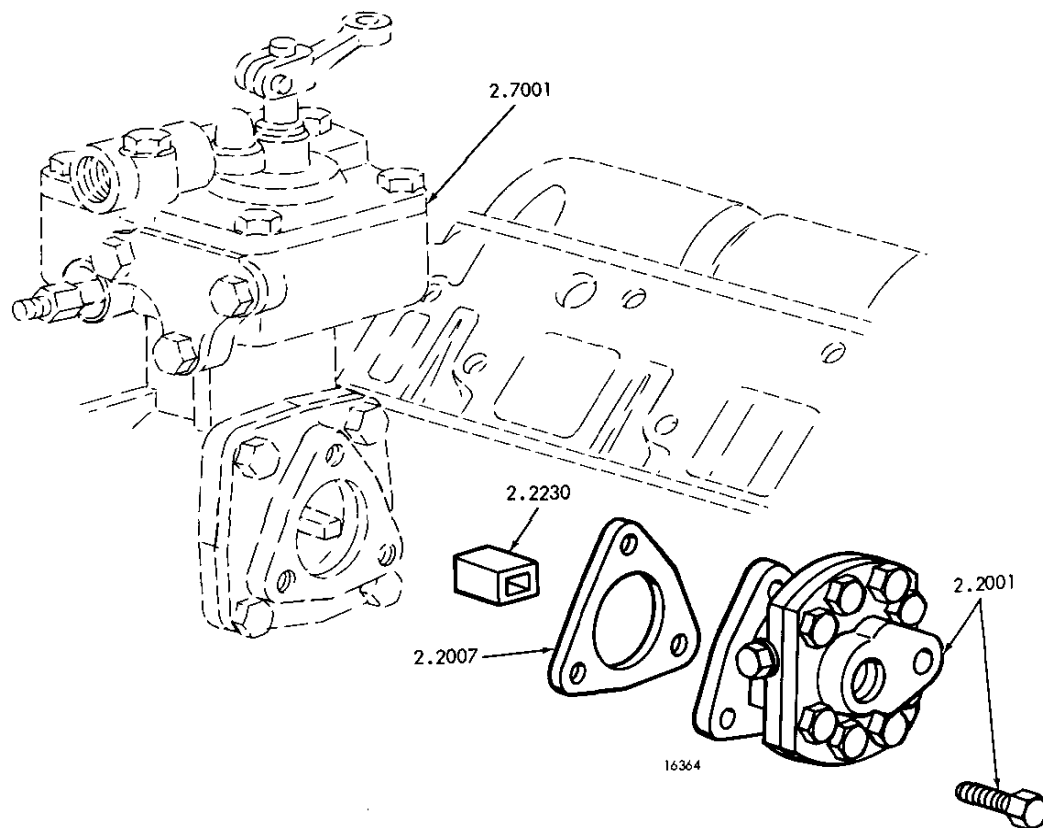


FIG. 2A FUEL PUMP ASSEMBLY

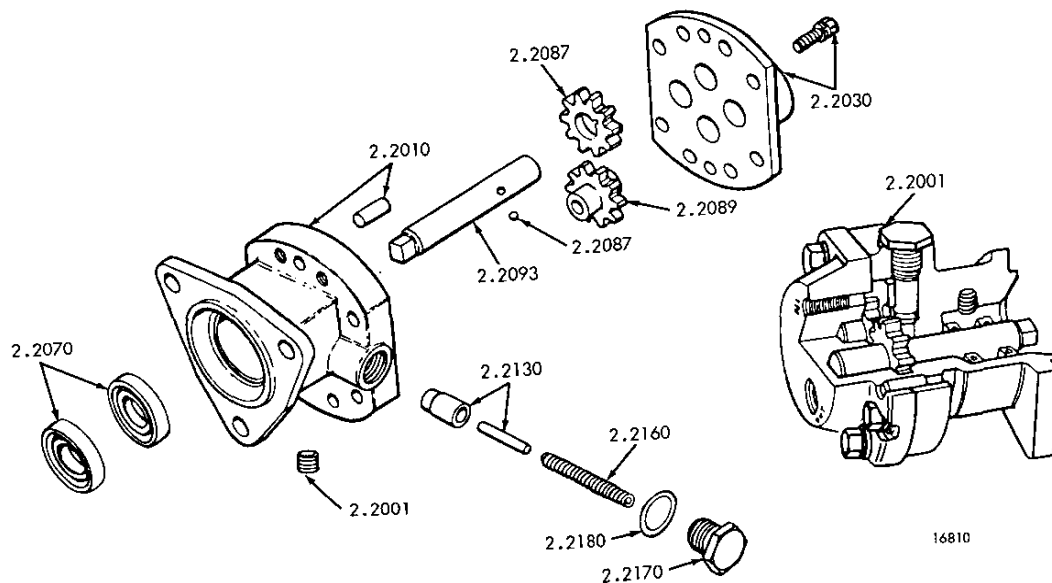


FIG. 2B FUEL PUMP

Figs. 2A &amp; 2B of 2.0000

Oct., 1979

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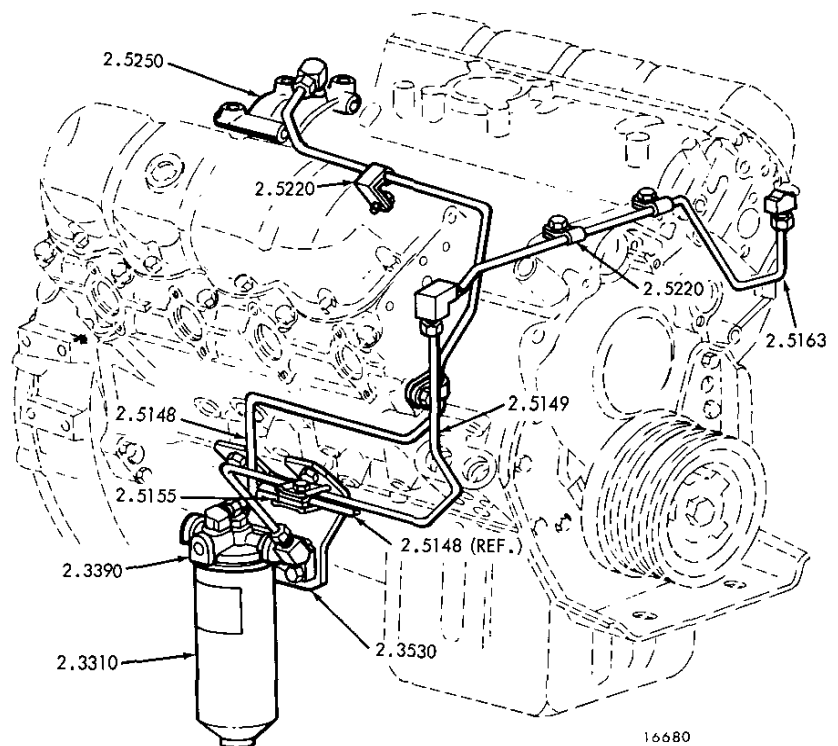
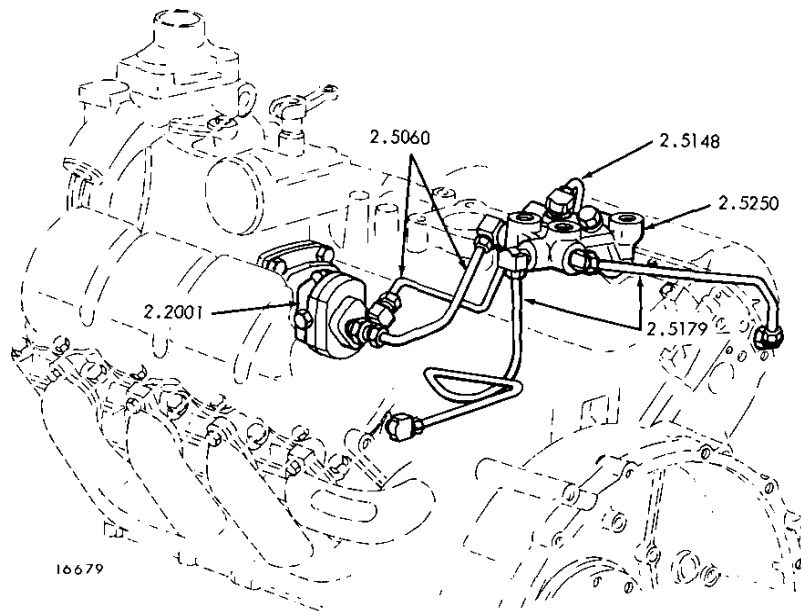
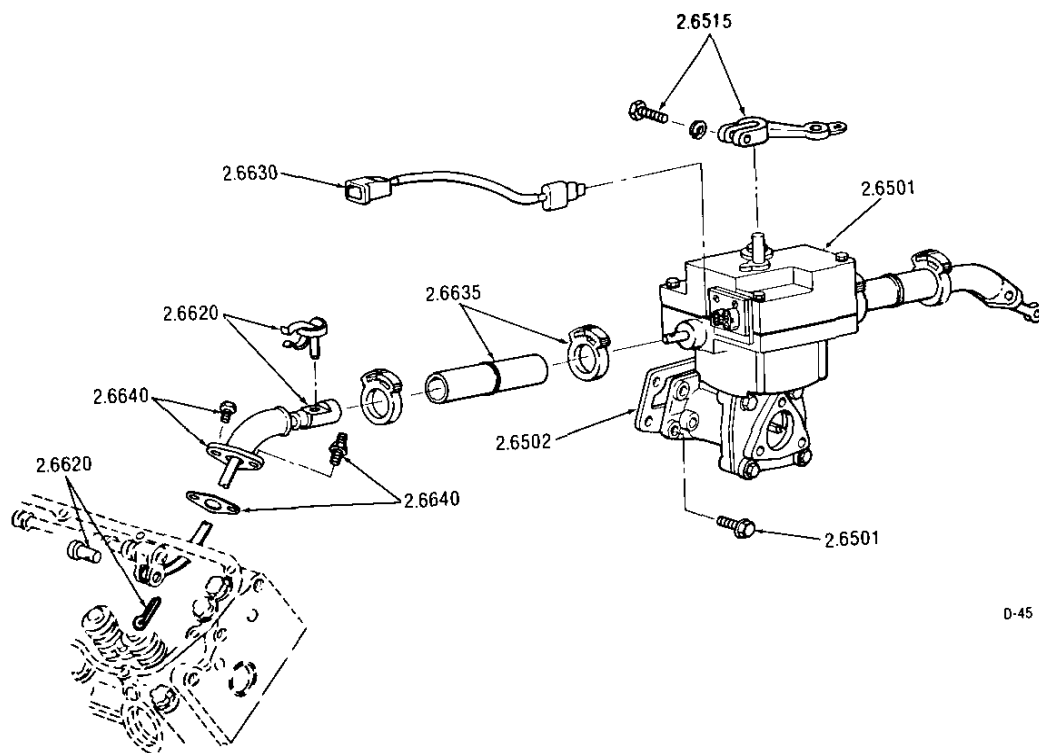


FIG. 3A FUEL SYSTEM

Fig. 3A of 2.0000

Oct., 1979

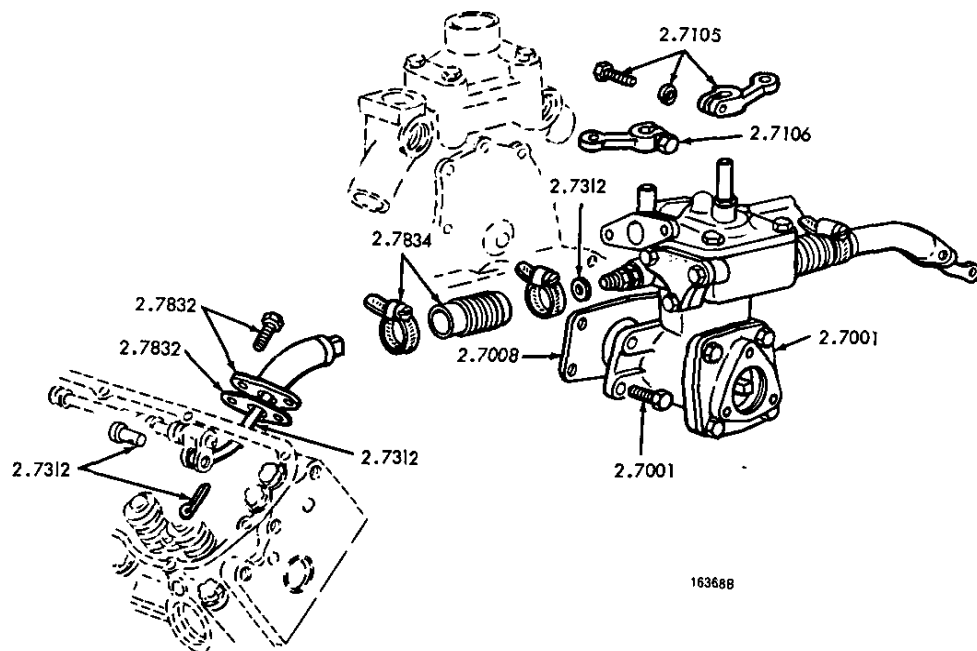
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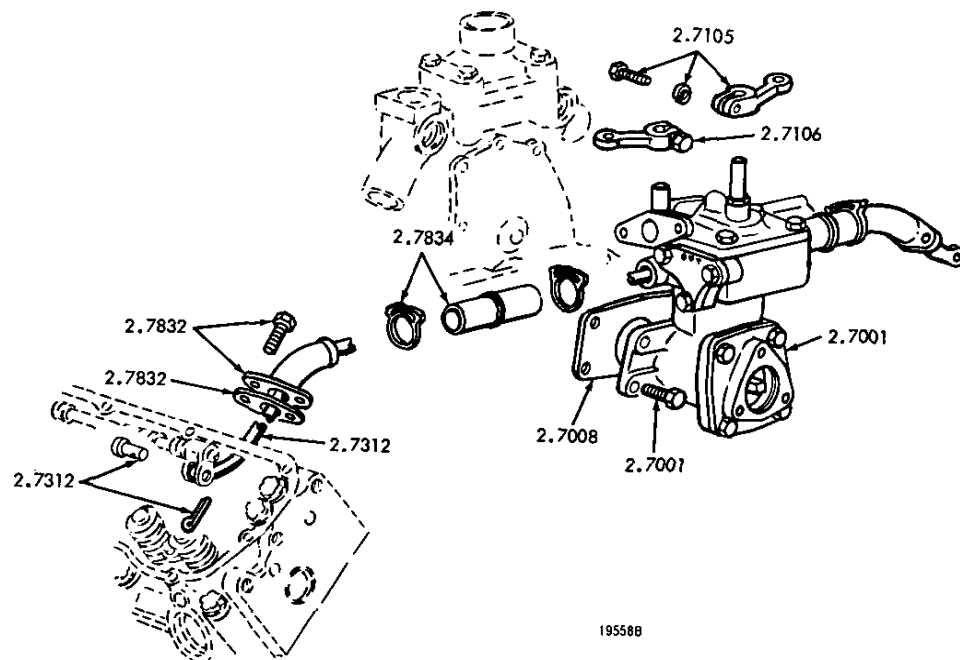
FIG. 3G ELECTRIC GOVERNOR

Fig. 3G of 2.0000



16368B

FIG. 4A GOVERNOR ASSEMBLY (FORMER)



19558B

FIG. 4B GOVERNOR ASSEMBLY (CURRENT)

Fig. 4A &amp; 4B of 2.0000

AUG., 1985

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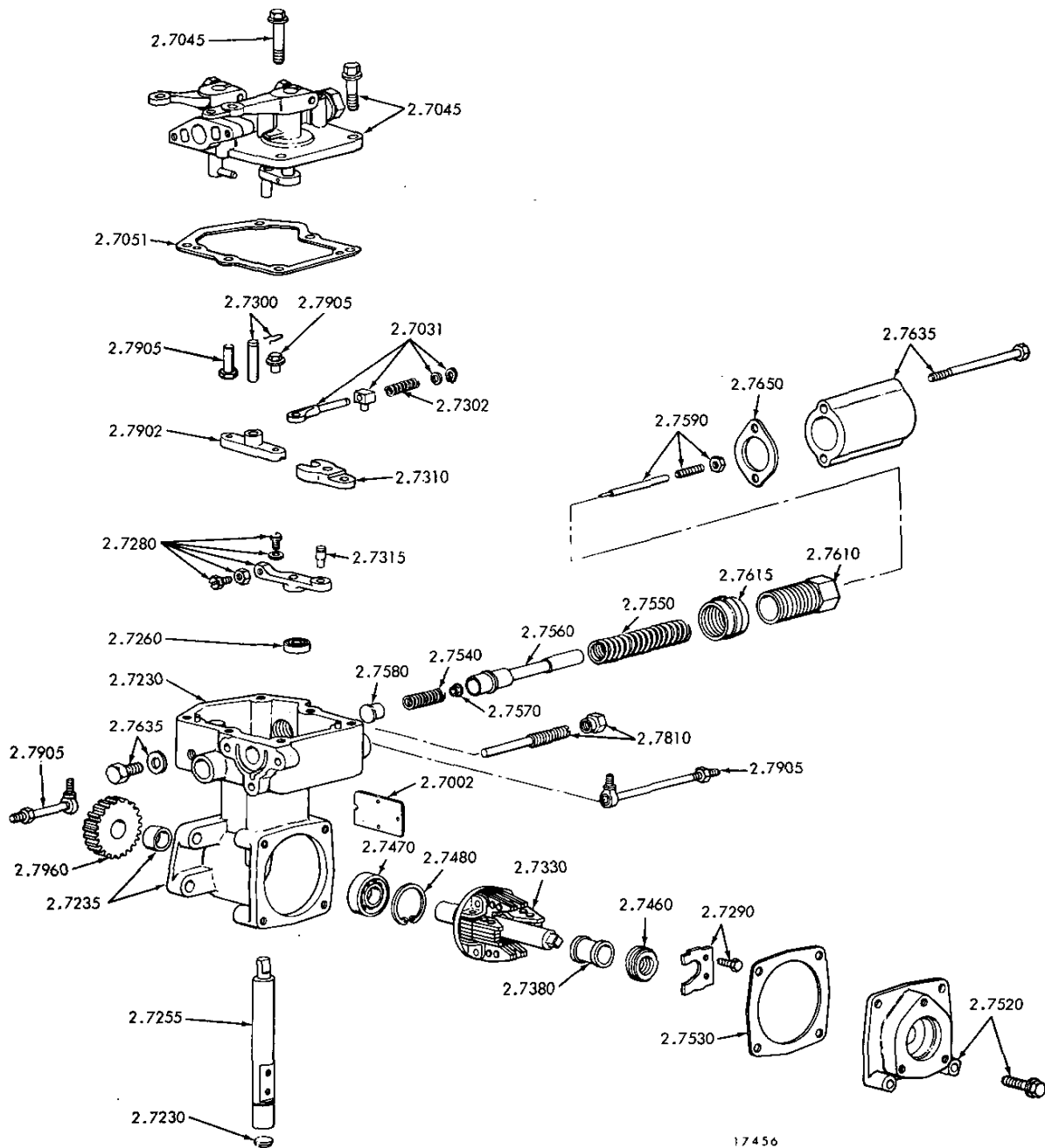
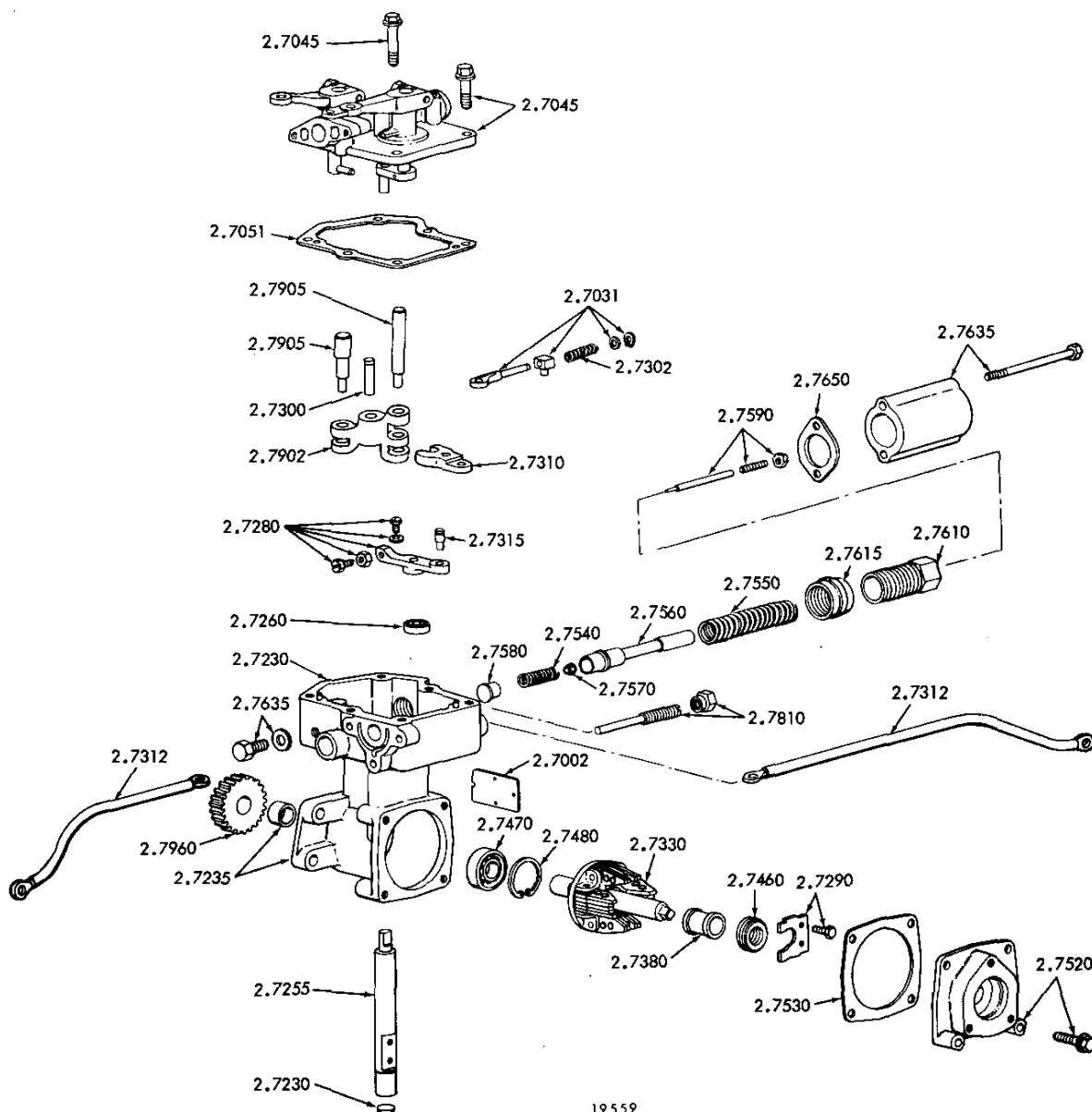


FIG. 4C GOVERNOR, LIMITING SPEED





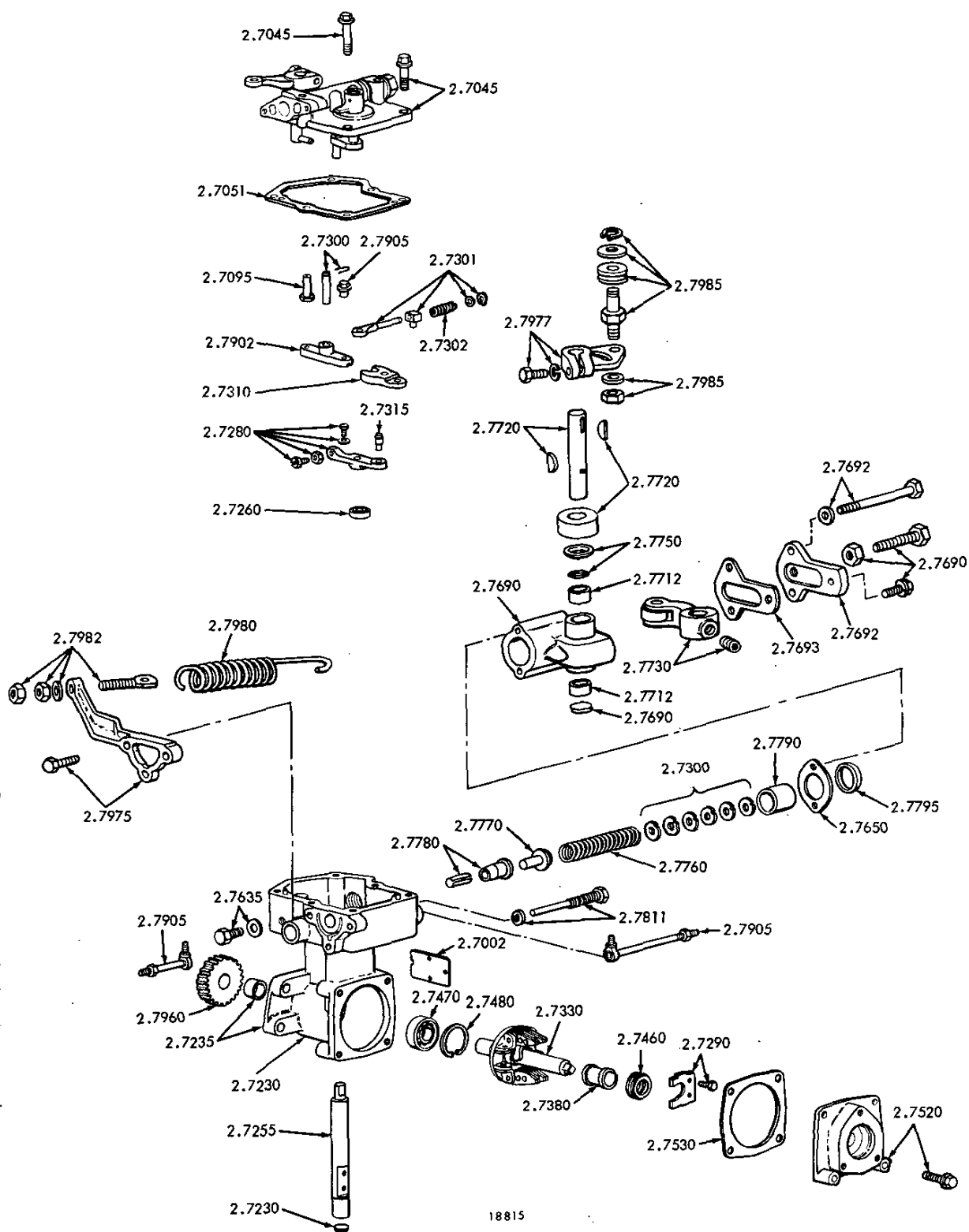
19559

FIG. 4D GOVERNOR, LIMITING SPEED

Fig. 4D of 2.0000

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18815

FIG. 4E GOVERNOR, VARIABLE SPEED

Fig. 4E of 2.0000

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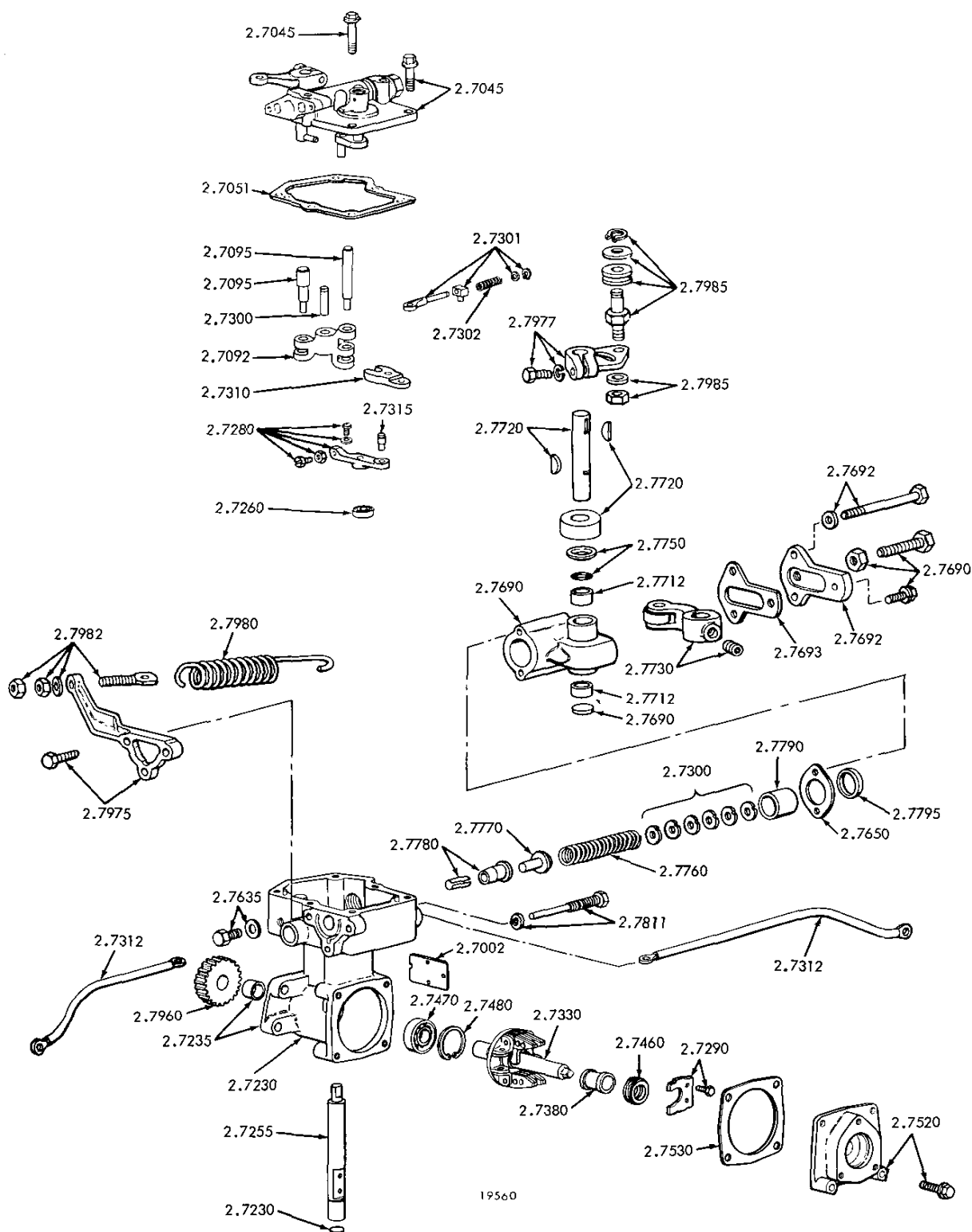


FIG. 4F GOVERNOR, VARIABLE SPEED

Fig. 4F of 2.0000

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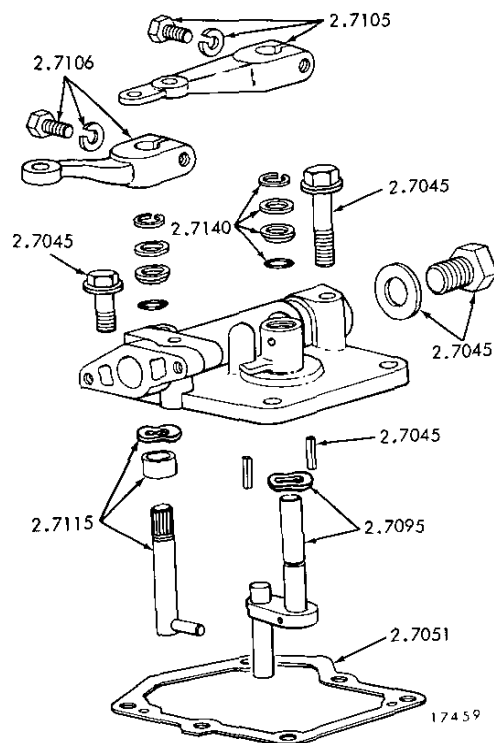


FIG. 4G GOVERNOR COVER

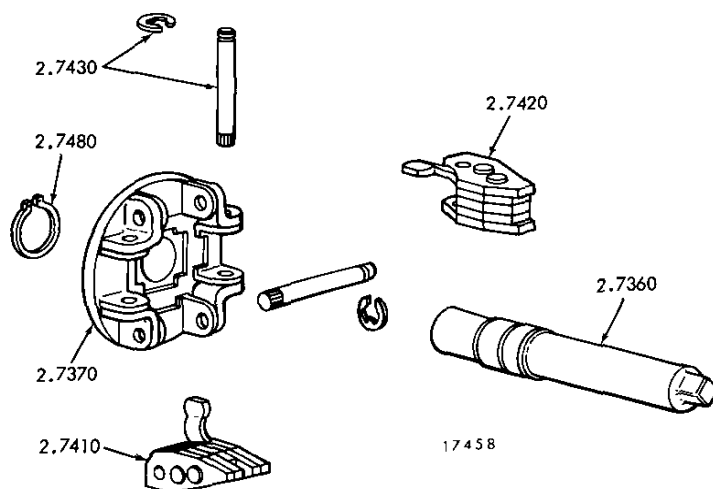


FIG. 4H GOVERNOR WEIGHT SHAFT AND CARRIER

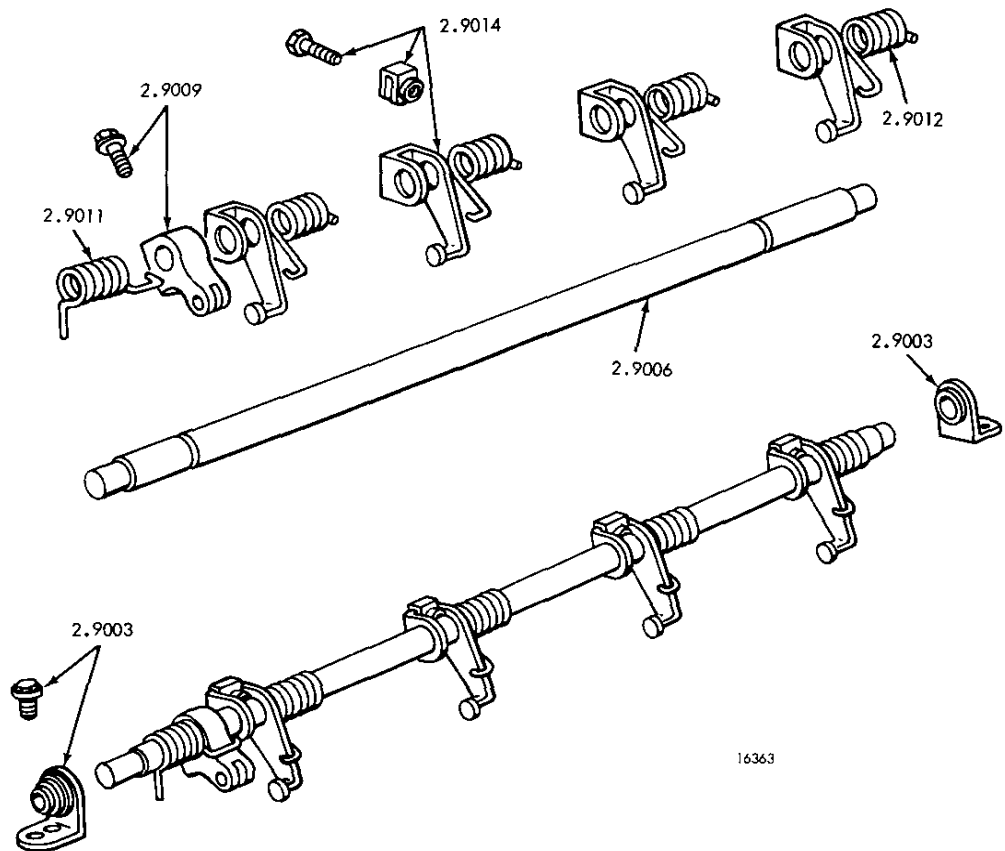


FIG. 5A INJECTOR CONTROLS

Fig. 5A of 2.0000

**2.1000A FUEL INJECTOR**

PART  
FIG . . . NUMBER . . . . . NAME AND DESCRIPTION . . . . .

**2.1001 - INJECTOR ASSY.**

QUANTITIES SHOWN ARE PER CYLINDER.  
SEE ASSEMBLY BREAKDOWN PAGE A1.

1A **5229850** INJECTOR ASSY. (4A53) . . . . . 1  
1A **5229865** + INJECTOR ASSY. (4A65) . . . . . 1  
1A **5229965** + INJECTOR ASSY. (4B65) . . . . . 1  
1A **5229960** INJECTOR ASSY. (4A40) . . . . . 1  
1A **5226110** INJECTOR ASSY. (4A70) . . . . . 1  
1A **5226055** INJECTOR ASSY. (4B45) . . . . . 1  
1A **5226175** INJECTOR ASSY. (4B55) . . . . . 1  
1A **5226180** INJECTOR ASSY. (4E67) . . . . . 1  
1A **5226260** INJECTOR ASSY. (4H60) . . . . . 1  
1A **5226270** INJECTOR ASSY. (4B75) . . . . . 1  
1A **5226435** INJECTOR ASSY. (4J60) . . . . . 1  
+ NOT SERVICED, USE 5229915.

**2.1002 - SERVICE KIT, INJECTOR**

A KIT INCLUDES (3) SEAL RINGS.

**5229930** SERVICE KIT . . . . . AR AR AR AR AR AR AR AR AR AR AR

**2.1010 - CONTAINER, INJECTOR SHIPPING**

**5149723** CONTAINER . . . . . AR AR AR AR AR AR AR AR AR AR AR

**2.1270 - CLAMP, INJECTOR**

1A **11504972** BOLT, M6X1.0X30.0 MM (12.9001) . . . . . 2 2 2 2 2 2 2 2 2 2 2

**2.1005 - LABEL, TIMING INJECTOR**

FOR A REPLACEMENT LABEL CONTACT  
YOUR LOCAL DISTRIBUTOR

**15SP-46** LABEL, TIMING INJECTOR . . . . . AR AR AR AR AR AR AR AR AR AR AR  
**15SP-48** LAMINATE, PLASTIC (1.8500) . . . . . AR AR AR AR AR AR AR AR AR AR AR

TYPES

## 2.1000A FUEL INJECTOR

		COLUMN											
PART		A	B	C	D	E	F	G	H	I	J	K	L
..FIG ... NUMBER ..... NAME AND DESCRIPTION .....													
<b>2.1001 - INJECTOR ASSY.</b>													
1A	5229850	INJECTOR ASSY. (4A53)	1										
1A	5229865	+ INJECTOR ASSY. (4A65)		1									
1A	5229965	+ INJECTOR ASSY. (4B65)			1								
1A	5229915	INJECTOR ASSY. (4C65)				1							
1A	5229960	INJECTOR ASSY. (4A40)					1						
1A	5226110	INJECTOR ASSY. (4A70)						1					
1A	5226175	INJECTOR ASSY. (4B55)							1				
1A	5226180	INJECTOR ASSY. (4E67)								1			
1A	5226260	INJECTOR ASSY. (4H60)									1		
1A	5226270	INJECTOR ASSY. (4B75)										1	
1A	5226055	INJECTOR ASSY. (4B45)											1
1A	5226435	INJECTOR ASSY. (4J60)											
+ NOT SERVICED, SHOWN FOR PART REFERENCE ONLY.													
<b>2.1020 - BODY ASSY., INJECTOR</b>													
A BODY ASSY. INCLUDES PIN IN 2.1090.													
1A	5229738	BODY ASSY.	1	1	1	1	1	1	1	1	1	1	1
<b>2.1030 - NUT, INJECTOR VALVE</b>													
1A	5229720	NUT ASSY. (INCLUDES FILTERS AND RING SEALS NOT SERVICED SEPARATELY)	1	1	1	1	1	1	1	1	1	1	1
<b>2.1060 - FOLLOWER, INJECTOR</b>													
A FOLLOWER ASSY. INCLUDES PIN IN 2.1100.													
1A	5229732	FOLLOWER ASSY.	1	1	1	1	1	1	1	1	1	1	1
<b>2.1080 - SPRING, INJECTOR PLUNGER</b>													
1A	5229731	SPRING	1	1	1	1	1	1	1	1	1	1	1
<b>2.1090 - PIN, INJECTOR FOLLOWER</b>													
1A	11504503	PIN	1	1	1	1	1	1	1	1	1	1	1
<b>2.1100 - PIN, INJECTOR STOP</b>													
1A	456540	PIN (12.9275)	1	1	1	1	1	1	1	1	1	1	1
<b>2.1160 - PLUNGER AND BUSHING ASSY., INJECTOR</b>													
PLUNGERS AND BUSHINGS ARE NOT SOLD SEPARATELY.													
1A	5229840	PLUNGER AND BUSHING ASSY. (4A53, 4B55)	1					1					
1A	5229838	PLUNGER AND BUSHING ASSY. (4A65)		1									
1A	5229944	PLUNGER AND BUSHING ASSY. (4B65)			1								

## 2.1000A FUEL INJECTOR

PART ..FIG .. NUMBER .. NAME AND DESCRIPTION ..			COLUMN											
			A	B	C	D	E	F	G	H	I	J	K	L
		<b>2.1160 - PLUNGER AND BUSHING ASSY., INJECTOR (CONT'D)</b>												
1A	<b>5229953</b>	PLUNGER AND BUSHING ASSY. (4C65, 4A70, 4E67, 4H60) .....				1	1	1		1	1			
1A	<b>5229961</b>	PLUNGER AND BUSHING ASSY. (4A40) .....					1					1		
1A	<b>5226358</b>	PLUNGER AND BUSHING ASSY. (7B75) .....											1	
	<b>NPN</b>	PLUNGER AND BUSHING ASSY. (4B45) .....												1
	<b>NPN</b>	PLUNGER AND BUSHING ASSY. (4J60) .....												1
		<b>2.1170 - RACK ASSY., INJECTOR</b>												
1A	<b>5229740</b>	RACK .....	1	1	1	1	1	1	1	1	1	1	1	1
		<b>2.1180 - GEAR, INJECTOR</b>												
1A	<b>5229717</b>	GEAR .....	1	1	1	1	1	1	1	1	1	1	1	1
		<b>2.1200 - VALVE, INJECTOR CHECK</b>												
1A	<b>5228694</b>	VALVE .....	1	1	1	1	1	1	1	1	1	1	1	1
		<b>2.1205 - CAGE, INJECTOR CHECK VALVE</b>												
1A	<b>5229856</b>	CAGE .....	1	1	1	1	1	1	1	1	1	1	1	1
		<b>2.1235 - TIP ASSY., INJECTOR SPRAY</b>												
		COMPONENTS OF TIP ASSY. ARE NOT SOLD SEPARATELY.												
1A	<b>5229727</b>	TIP ASSY. (4A53) .....	1											
1A	<b>5229846</b>	TIP ASSY. (4C65) .....		1	1	1								
1A	<b>5229964</b>	TIP ASSY. (4A40) .....					1							
1A	<b>5226084</b>	TIP ASSY. (4A70) .....						1						
1A	<b>5226168</b>	TIP ASSY. (4B45, 4B55, 4J60) .....							1				1	1
1A	<b>5226174</b>	TIP ASSY. (4E67) .....								1				
1A	<b>5226364</b>	TIP ASSY. (4H60, 4B75) .....									1	1		
		<b>2.1238 - VALVE KIT, INJECTOR</b>												
		A KIT CONSISTS OF ITEMS IN 2.1250 AND 2.1255.												
	<b>5228769</b>	VALVE KIT .....	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
		<b>2.1250 - SPRING, INJECTOR VALVE</b>												
1A	<b>5228596</b>	SPRING .....	1	1	1	1	1	1	1	1	1	1	1	1
		<b>2.1255 - SEAT, INJECTOR VALVE SPRING</b>												
1A	<b>5228766</b>	SEAT .....	1	1	1	1	1	1	1	1	1	1	1	1



## 2.1000A FUEL INJECTOR

			C O L U M N											
P A R T			A	B	C	D	E	F	G	H	I	J	K	L
. . F I G . . . N U M B E R . . . . . N A M E A N D D E S C R I P T I O N . . . . .														
2.1257 - CAGE, INJECTOR VALVE SPRING														
1A	5229726	CAGE . . . . .	1	1	1	1	1	1	1	1	1	1	1	1
2.1270 - CLAMP, INJECTOR														
1A	5229730	CLAMP . . . . .	1	1	1	1	1	1	1	1	1	1	1	1

## 2.2000 FUEL PUMP

PART		TYPES													
FIG	NUMBER	NAME AND DESCRIPTION	1 8 7	1 9 8	2 0 0	2 0 1									
		<b>2.2001 - PUMP ASSY., FUEL</b>													
		FOR COMPONENTS OF THE FUEL PUMP KIT REFER TO ASSEMBLY BREAKDOWN PAGE A1.													
	<b>5199560</b>	PUMP KIT, FUEL	1		1										
	<b>8923963</b>	PUMP KIT, GEROTOR FUEL		1		1									
	<b>8924169</b>	CONNECTOR, 1/2" TUBE (12.9460)		1	1	1									
	<b>8924315</b>	CONNECTOR, 5/16" TUBE (12.9380)		1											
	<b>8925030</b>	ELBOW, 3/8" TUBE 90 DEG. (12.9480)			1										
	<b>8924217</b>	ELBOW, 3/8" TUBE 90 DEG. (12.9480)				1									
2A,C	<b>11504471</b>	BOLT, M8 1.25 X 25.0 MM FLG. (12.9001)	3	3	3	3									
	<b>8924380</b>	PLUG, 1/8" PIPE (12.9550)	2												
		<b>2.2004 - OVERHAUL KIT, FUEL PUMP</b>													
		INCLUDES ITEMS IN 2.2001, 2.2007, 2.2070, 2.2093, 2.2130, 2.2160 AND 2.2180.													
	<b>5195078</b>	OVERHAUL KIT (ALSO INCLUDES ITEM IN 2.2089)	AR												
	<b>8923810</b>	OVERHAUL KIT, GEROTOR (ALSO INCLUDES ITEMS IN 2.2030 AND 2.2090)		1		1									
		<b>2.2007 - GASKET, FUEL PUMP TO ENGINE</b>													
2A,C	<b>5150193</b>	GASKET (5.1010)	1	1	1	1									
		<b>2.2230 - COUPLING, FUEL PUMP DRIVE</b>													
2A	<b>5154216</b>	COUPLING	1	1	1	1									

## 2.2000 FUEL PUMP

PART			COLUMN												
FIG	NUMBER	NAME AND DESCRIPTION	A	B											
<b>2.2001 - PUMP ASSY., FUEL</b>															
	<b>5199560</b>	PUMP KIT, FUEL (L.H.) (3/8" INLET)	1												
	<b>8923963</b>	PUMP KIT, GEROTOR FUEL (L.H.) (3/8" INLET)		1											
	<b>116332</b>	BUSHING, RED. 3/8" X 1/4" (12.9570)		1											
2B	<b>5136240</b>	PLUG, .42" DIA.	1												
2B,C	<b>5136241</b>	PLUG, .58" DIA.	1	2											
<b>2.2007 - GASKET, FUEL PUMP TO ENGINE</b>															
2A,C	<b>5150193</b>	GASKET (5.1010)	1	1											
<b>2.2010 - BODY, FUEL PUMP</b>															
2B	<b>5146337</b>	BODY (L.H. 3 DRNS) .250"/.251"	1												
2C	<b>8922428</b>	BODY (L.H. 1 DRN) .275"		1											
	<b>8924380</b>	PLUG, 1/8" PIPE (12.9550)	2												
	<b>141195</b>	PIN, 1/4" X 5/8" DOWEL (12.9290)	2												
<b>2.2030 - COVER, FUEL PUMP</b>															
2B	<b>5134560</b>	COVER	1												
2C	<b>8922427</b>	COVER		1											
2C	<b>5103650</b>	SEAL, O-RING		1											
2B	<b>5198558</b>	BUSHING, 3/8" X 1/4"	1												
2B,C	<b>3719219</b>	BOLT, 1/4"-20 X 3/4" (WITH L.W.)	8	4											
<b>2.2070 - SEAL, FUEL PUMP OIL</b>															
2B,C	<b>5107223</b>	SEAL	2	2											
<b>2.2087 - GEAR, FUEL PUMP DRIVE</b>															
2B	<b>5174975</b>	GEAR	1												
2B	<b>147481</b>	BALL, 1/8" DIA STEEL (12.9670)	1												
<b>2.2089 - SHAFT, FUEL PUMP DRIVEN</b>															
A SHAFT ASSY. INCLUDES GEAR WHICH IS NOT SOLD SEPARATELY.															
2B	<b>5181747</b>	SHAFT ASSY.	1												
<b>2.2090 - ROTOR, FUEL PUMP</b>															
2C	<b>8922431</b>	GEROTOR ASSY., FUEL PUMP (INCLUDES INNER AND OUTER ROTORS)		1											

## 2.2000 FUEL PUMP

PART  
 ..FIG ... NUMBER ..... NAME AND DESCRIPTION .....

COLUMN

## 2.2093 - SHAFT, FUEL PUMP DRIVE

A SHAFT ASSY. INCLUDES SHAFT IN  
 2.2093 AND ITEMS IN 2.2087.

	2C	2B	2C	5187146	8922432	5178700	5103652	SHAFT ASSY. (DRIVE)	SHAFT (DRIVE)	SHAFT (DRIVE)	PIN, .10"X.62" L. (2.2001)
								1			
								1	1		
								1		1	

## 2.2130 - VALVE ASSY., FUEL PUMP

	2B,C	2B,C	5174973	103709	VALVE	PIN 5/32" X 1" STRAIGHT (12.9300)
					1	1
					1	1

## 2.2160 - SPRING, FUEL PUMP VALVE RETAINING

	2B,C	5184530	SPRING
			1
			1

## 2.2170 - PLUG, FUEL PUMP VALVE

	2B,C	5174971	PLUG
			1
			1

## 2.2180 - GASKET, FUEL PUMP VALVE PLUG

	2B,C	5161003	GASKET
			1
			1

## 2.3000A FUEL FILTER AND STRAINER

PART		TYPES													
FIG	NUMBER	NAME AND DESCRIPTION	6 8 4	7 9 2	8 0 4	8 2 8									
		<b>2.3001 - STRAINER ASSY., FUEL</b>													
	<b>25011011</b>	STRAINER CARTRIDGE (SPIN ON) (T-936) .....			1										
	<b>8923847</b>	PLUG, 1/4" PIPE (4.7001) .....			2										
		<b>2.3080 - COVER, FUEL STRAINER</b>													
	<b>8921410</b>	COVER (SPIN ON) .....			1										
		<b>2.3310 - FILTER ASSY., FUEL</b>													
		FOR TYPE 794 USE TYPE 792.													
3A	<b>25010959</b>	CARTRIDGE (SPIN ON) (TP928) .....	1	1	1	1									
		<b>2.3390 - COVER, FUEL FILTER</b>													
3A	<b>5148171</b>	COVER (SPIN-ON) .....	1		1	1									
3A	<b>8923417</b>	COVER (SPIN-ON) .....		1											
	<b>5121182</b>	PLUG, 1/4" HEX. SOC. PIPE (2.4015) .....	2		1										
	<b>8922327</b>	PLUG, 1/4" PIPE (12.9550) .....		1	1										
	<b>8923847</b>	PLUG, 1/4" SQ. SOC. PIPE (4.7001) .....				2									
	<b>11500879</b>	BOLT, M10X1.5X30.0 MM (12.9001) .....			2	2									
	<b>11500725</b>	BOLT, M10X1.5X35.0 MM (12.9001) .....	2	2		2									
	<b>11501052</b>	NUT, M10X1.5 (12.9120) .....	2		2										
		<b>2.3530 - BRACKET, FUEL FILTER MOUNTING</b>													
3A	<b>8922269</b>	BRACKET .....	1												
3A	<b>8922809</b>	BRACKET .....		1		1									
3A	<b>8924125</b>	BRACKET .....			1										
	<b>8922228</b>	BOLT, M10X1.5X25.0 MM (12.9001) .....	2												
	<b>11500881</b>	BOLT, M10 X 1.5 X 40.0 MM (12.9001) .....			2										
	<b>8922229</b>	BOLT, M10X1.5X50.0 MM (12.9001) .....		2		2									

## 2.5000A FUEL LINES AND FUEL COOLER

PART		TYPES												
FIG	NUMBER	NAME AND DESCRIPTION	1	1	1	1	1	1	1	1	1	1	1	1
			5	6	6	6	6	6	6	6	6	7	7	7
			4	0	1	2	4	4	4	4	6	0	0	1
			8	8	4	8	4	5	6	7	6	7	9	
2.5100 - TUBE, FUEL PUMP TO FILTER														
	8921872	% TUBE ASSY., DEV. L. 1127.0MM (2.5149)	1											
	8922032	TUBE ASSY., DEV. L. 1297.0 MM	1											
	5107858	HOSE ASSY., #6X28.5" L.				1				1				
	8924135	TUBE ASSY., DEV. L. 1171.0 MM		1	1		1	1	1		1			
	8927441	TUBE ASSY., DEV. L. 1192.0 MM										1	1	
	8924218	CONNECTOR, 5/16" TUBE (12.9460)	1	1	1	1	1	1			1	1	1	
	8924171	CONNECTOR, 3/8" TUBE (12.9460)				1				1				
	8924215	* ELBOW, 5/16" INV. FL. TUBE 90 DEG. (12.9480)	2									1		
	193004	ELBOW, 90 DEG. INV. FL. 3/8" TUBE (12.9480)				2								
	8925030	ELBOW, 90 DEG. INV. FL. 3/8" TUBE (12.9480)							1	2	1			
		% NOT SERVICED; EFFECTIVE WITH 8G23415. FOR SERVICE PRIOR TO 8G23415 USE 8922032 TUBE ASSY. AND (2) 9432264 CONNECTORS. * USED ON UNITS PRIOR TO 8G23415.												
2.5120 - CLIP, FUEL PUMP TO FILTER HOSE														
3A	3290459	* CLIP, 5/16" TUBE (2.5220)	1											
	8922292	# CLIP, 5/16" TUBE	1	1	1									
	5182629	* CLIP, 5/16" TUBE (12.4080)	1											
	8922216	# CLIP, 5/16" TUBE	1	1	1		1	1	1		1			
	3291486	* CLIP, 5/16" TUBE (2.5220)	1											
	2362448	CLIP, .688" (12.8554)				1					1			
	5101020	STRAP, NYLON TIE (2.5255)				AR					AR			
3A	11504505	* BOLT, M8X1.25X20.0 MM (12.9001)	1											
	8921122	BOLT, M10X1.5X20.0 MM (12.9001)							1		1			
	106261	* WASHER, 5/16" (12.9190)	1											
	446200	* WASHER, 5/18" (12.9190)	1											
	120392	# WASHER, 9/32" (12.9190)	1	1	1									
	11502811	* NUT, M8X1.25 (2.5220)	1			1				1				
	11503749	# NUT, M6X1.00 * THRU 8G23414. # EFFECTIVE WITH 8G23415.	1	1	1									
2.5130 - BRACKET, FUEL PUMP TO FILTER HOSE CLIP														
	5108956	* BRACKET (4.1540)	1											
	8922215	# BRACKET	1		1		1		1		1			
	8923350	BRACKET * THRU 8G23414. # EFFECTIVE WITH 8G23415.		1				1						
2.5144 - HOSE, FUEL PUMP TO JUNCTION BLOCK														
	8920452	% TUBE ASSY., DEV. L. 358.65MM	1											
	8922257	TUBE ASSY., DEV. L. 414.54 MM	1	1	1	1					1			
	8924467	TUBE ASSY., DEV. L. 496.0 MM					1	1	1	1		1	1	
	8924162	* ELBOW, 1/2" INV. FL. TUBE 45 DEG. (12.9480)	1											
	8925002	ELBOW, 1/2" INV. FL. TUBE 90 DEG. (12.9480)	1	1	1	1					1			
	8924169	# CONNECTOR, 1/2" INV. FL. TUBE (12.9460)	1											

## 2.5000A FUEL LINES AND FUEL COOLER

FIG	PART NUMBER	NAME AND DESCRIPTION	TYPES										
			1 5 4 8	1 6 0 8	1 6 1 4	1 6 2 8	1 6 4 4	1 6 4 5	1 6 4 6	1 6 4 7	1 6 6 6	1 7 0 7	1 7 1 9
		<b>2.5144 - HOSE, FUEL PUMP TO JUNCTION BLOCK (CONT'D)</b>											
		% NOT SERVICED; EFFECTIVE WITH 8G23415. FOR SERVICE PRIOR TO 8G23415 USE 8922257 TUBE ASSY. AND 431538 CONN ECTOR. * THRU 8G23414. # EFFECTIVE WITH 8G23415.											
		<b>2.5149 - TUBE, FILTER TO CYLINDER HEAD</b>											
	8921870	% TUBE ASSY., DEV. L. 606.0 MM	1										
	8922030	TUBE ASSY., DEV. L. 614.83 MM	1										
	8925152	HOSE ASSY., #6X24.92" L.				1				1			
	5199575	# HOSE, #6X22.0" L. (12.8550)							1		1		
	8923851	HOSE ASSY., #6X18.55" L. (2.5110)				1				1			
	8924134	TUBE ASSY., DEV. L. 647 MM			1		1	1				1	1
	8927443	TUBE ASSY., DEV. L. 645.5 MM											
	8924172	ADAPTOR, PIPE 1/4"-18 W/SEAL (12.9460)							1		1		
	8924188	TEE, 90 DEG. INV. FL. 5/16" (7.4596)	1	1	1		1	1				1	1
	442348	TEE, 3/8" INV. FL. TUBE (12.9490)							1		1		
	8925030	ELBOW, 90 DEG. INV. FL. 3/8" (12.9480)				1			1				
	5199579	FITTING, MALE INV. FL. 3/8" TUBE (12.8552)							1		1		
	5199588	FITTING, 90 DEG. MALE INV. FL. 3/8" TUBE (12.8552)							1		1		
	8924218	CONNECTOR, 5/16" TUBE (12.9460)	1	1	1		1	1			1		
	8924171	CONNECTOR, 3/8" TUBE (12.9460)				1			1		1		
	103341	WASHER, 7/16" (12.9190)				2				2			
		% NOT SERVICED; EFFECTIVE WITH 8G23415. FOR SERVICE PRIOR TO 8G23415 USE 8922030 TUBE ASSY. # BULK HOSE, CUT TO LENGTH SHOWN.											
		<b>2.5163 - TUBE, FUEL SUPPLY CROSSOVER</b>											
	8920456	% TUBE ASSY., DEV. L. 27.35"	1										
	8922029	TUBE ASSY., DEV. L. 719.24 MM	1	1	1		1	1					
	5107854	HOSE ASSY., #6X18.3" L. (2.5163)				1							
	5199575	# HOSE, #6X21.0" L. (12.8550)							1		1		
	8927444	TUBE ASSY., DEV. L. 692.0 MM										1	1
	5199579	FITTING, MALE INV. FL. 3/8" TUBE (12.8552)							1		1		
	5199588	FITTING, 90 DEG. MALE INV. FL. 3/8" TUBE (12.8552)							1		1		
	8925030	ELBOW, 3/8" INV. FL. TUBE 90 DEG. (12.9480)				2							
	8924215	ELBOW, 5/16" INV. FL. TUBE 90 DEG. (12.9480)	1	1	1		1	1				1	1
		% NOT SERVICED, SUPERSEDED BY 8922029. # BULK HOSE, CUT TO LENGTH SHOWN.											
		<b>2.5164 - CLIP, FUEL SUPPLY CROSSOVER TUBE</b>											
3A	3290459	CLIP, 5/16" TUBE (2.5220)	2	2	2		2	2				3	3
	2362448	CLIP, .688" (12.8554)				1							
	2488022	CLIP, .562" (12.8554)				2			2	2	2		
	11500714	BOLT, M8X1.25X20.0 MM (12.9001)							2				
3A	8921122	BOLT, M10X1.5X20.0 MM (12.9001)	2	2	2		2	2			2	2	2

## 2.5000A FUEL LINES AND FUEL COOLER

PART		TYPES										
FIG	NUMBER	NAME AND DESCRIPTION										
		1 5 4 8	1 6 0 8	1 6 1 4	1 6 2 8	1 6 4 4	1 6 4 5	1 6 4 6	1 6 4 7	1 6 6 6	1 7 0 7	1 7 1 9
2.5164 - CLIP, FUEL SUPPLY CROSSOVER TUBE (CONT'D)												
5170765	SPACER, 11/32" (7.1581)				1							
11502811	NUT, M8X1.25 (2.5220)				2			1				
11501066	NUT, M8X1.25 (12.9190)											
2.5175 - TUBE, JUNCTION BLOCK TO CYLINDER HEAD												
8921362	% TUBE ASSY., DEV. L. 11.57" (R.B.) (8922254)	1										
8922254	TUBE ASSY., DEV. L. 327.27 MM	1	1	1						1		
8921361	% TUBE ASSY., DEV. L. 21.34" (L.B.) (8922421)	1										
8922421	TUBE ASSY., DEV. L. 521.0 MM (2.5179)	1	1	1						1		
8923966	HOSE ASSY., #6X10.92" L. (4.1581)				1							
8924319	HOSE ASSY., #6X12.92" L.				1							
8924465	TUBE ASSY., DEV. L. 584 MM					1	1	1	1		1	1
8924466	TUBE ASSY., DEV. L. 308.8 MM					1	1	1	1		1	1
8924215	ELBOW, 5/16" INV. FL. TUBE 90 DEG. (12.9480)	1	1	2		1	1	1	1	1	1	1
8924161	ELBOW, 3/8" INV. FL. TUBE 45 DEG. (12.9480)				1				1			
8925030	ELBOW, 3/8" INV. FL. TUBE 90 DEG. (12.9480)				2							
8924218	CONNECTOR, 5/16" TUBE (12.9460) % NOT SERVICED, USE PART SHOWN IN PARENTHESIS.	2	2	2		1	1	1	1	1	1	1
2.5180 - CLIP, CYLINDER HEAD INLET												
3290459	* CLIP, 5/16" TUBE (2.5220)	1										
8922286	# CLIP, 5/16" TUBE	1		1		1	1	1		1	1	1
8922292	CLIP, 5/16" TUBE (2.5220)					1	1			1	1	1
5134840	CLIP, 5/16" TUBE (2.5220)							1				
120392	WASHER, 9/32" (12.9190)					1	1			1	1	1
120393	# WASHER, 5/16" (12.9190)	1	1			1	2	3		1	1	1
11503749	NUT, M6X1.00 (2.5220)					1	1			1	1	1
11501066	NUT, M8X1.25 (12.9190) * THRU 8G23414. # EFFECTIVE WITH 8G23415.							1				
2.5190 - BRACKET, FILTER TO CYLINDER HEAD CLIP												
8927445	BRACKET, 43.0 MM L.										1	
8927446	BRACKET, 57.0 MM L.											1
2.5250 - BLOCK, FUEL SYSTEM JUNCTION												
8922489	BLOCK	1	1	1	1					1		
8924058	BLOCK					1	1	1	1		1	1
5121182	PLUG, 1/4" PIPE (2.4015)	4	4	4	4					4		
8920442	BOLT, M10X1.5X80.0MM FLG. (4.2291)	1	1	1	1	1	1	1	1	1	1	1



## 2.6000B ELECTRIC GOVERNOR

PART		NAME AND DESCRIPTION	TYPES											
FIG	NUMBER		5											
		<b>2.6501 - GOVERNOR ASSY.</b>												
3G	<b>8926410</b>	GOVERNOR (ELECTRONIC ENGINE CONTROL)	1											
3G	<b>8920438</b>	BOLT, M10X1.5X30.0 MM (2.7001)	3											
3G	<b>8922016</b>	BOLT, M10X1.5X30.0 MM (2.7001)	1											
		<b>2.6502 - GASKET, GOVERNOR TO CYLINDER BLOCK</b>												
3G	<b>8920308</b>	GASKET (2.7008)	1											
		<b>2.6507 - KIT, GOVERNOR INSTALLATION</b>												
		A KIT INCLUDES THE NECESSARY ITEMS TO INSTALL AN ELECTRONIC ENGINE CONTROL GOVERNOR.												
	<b>8928731</b>	KIT, GOVERNOR FIELD INSTALLATION	AR											
		<b>2.6515 - LEVER ASSY., ACTUATOR</b>												
3G	<b>8920859</b>	LEVER (2.7105)	1											
3G	<b>179796</b>	BOLT, 1/4"-20X7/8" (12.9001)	1											
3G	<b>103319</b>	LOCKWASHER, 1/4" (12.9200)	1											
		<b>2.6620 - LINK, ACTUATOR OPERATING CONNECTION</b>												
3G	<b>8926452</b>	LINK, LOWER INJECTOR RACK	2											
3G	<b>8926453</b>	PIN, SPRING CLIP	2											
3G	<b>103361</b>	PIN, 1/16"X1/2" COTTER (12.9250)	2											
3G	<b>5147345</b>	PIN, 1/4"X49/64" CLEVIS (2.9022)	2											
		<b>2.6630 - LEAD, JUMPER TO SHUTDOWN SOLENOID</b>												
3G	<b>8926451</b>	LEAD	1											
		<b>2.6635 - BOOT, GOVERNOR TO INJECTOR LINK</b>												
3G	<b>8924642</b>	BOOT	2											
3G	<b>1627086</b>	CLAMP, 28.3 MM-35.5 CLAMPING RANGE (2.7834)	4											
		<b>2.6640 - TUBE, CYLINDER HEAD GOVERNOR CONTROL LINK</b>												
3G	<b>8920384</b>	TUBE	2											
3G	<b>8920399</b>	GASKET	2											
3G	<b>1262788</b>	STUD, M8X1.25X20.0X15.0 MM (12.9117)	2											
3G	<b>8920403</b>	BOLT, M8X1.25X20.0 MM (1.2050)	2											
		<b>2.6645 - TERMINAL, EEC GOVERNOR MALE</b>												
	<b>12010085</b>	TERMINAL	AR											

## 2.6000B ELECTRIC GOVERNOR

PART  
..FIG .. NUMBER ..... NAME AND DESCRIPTION .....

TYPES

2.6650 - SEAL, EEC GOVERNOR WIRE

12015323 SEAL ..... AR

2.6655 - BODY AND SEAL ASSY., EEC GOVERNOR

12020089 BODY AND SEAL ASSY. (6 WAY  
CONNECTOR) ..... AR

2.6660 - PLUG, EEC GOVERNOR CAVITY

12010300 PLUG ..... AR

## 2.7000A MECHANICAL GOVERNOR

PART		NAME AND DESCRIPTION		TYPES							
FIG	NUMBER			1	1	1	1	1	1	1	1
				6	7	7	8	8	8	8	8
				0	3	9	4	5	7	7	7
				1	1	3	3	6	6	7	8
<b>2.7001 - GOVERNOR ASSY.</b>											
SEE ASSEMBLY BREAKDOWN PAGE A1.											
4A	8921800	* GOVERNOR ASSY., LIMITING SPEED (3000 RPM)		1							
4A	8922347	+ GOVERNOR ASSY., LIMITING SPEED (2800 RPM)			1						
	8922870	GOVERNOR ASSY., VARIABLE SPEED (800-3400 RPM)				1					
	8924346	GOVERNOR ASSY., LIMITING SPEED (3000 RPM)					1				
	8923672	= GOVERNOR ASSY., LIMITING SPEED (3000 RPM)						1			
	8924644	GOVERNOR ASSY., LIMITING SPEED (2600-3200 RPM)							1		
	8924646	GOVERNOR ASSY., VARIABLE SPEED (3000-3400 RPM)								1	
	8924645	GOVERNOR ASSY., LIMITING SPEED (3200 RPM)									1
	8922981	KIT, LINKAGE LOCK REWORK		1	1	1					
4A,B	8920438	BOLT, M10 X 1.5 X 30.0 MM (W/WASH. HD.)		2	2	2	2	2	3	3	3
4A,B	8922016	BOLT, M10 X 1.5 X 30.0 MM (W/WASH. HD.)		2	2	2	2	2	1	1	1
		* NOT SERVICED, USE 8923672 AND ONE (1) EACH OF 5113338 LEVER, 179796 BOLT AND 103319 LOCKWASHER.									
		+ NOT SERVICED, USE 8923675, AND ONE (1) EACH OF 5113338 LEVER, 179796 BOLT AND 103319 LOCKWASHER.									
		= NOT SERVICED, USE 8924644 AND (1) EACH OF 8924639 LINK, 89204640 LINK, 8920384 TUBE, 8924641 BOOT, 892464 2 BOOT AND (4) 8924643 CLAMPS.									
<b>2.7008 - GASKET, GOVERNOR TO CYLINDER BLOCK</b>											
4A,B	8920308	GASKET		1	1	1	1	1	1	1	1
<b>2.7012 - KIT, GOVERNOR CONVERSION</b>											
	8922708	KIT, GOVERNOR CONVERSION (3000 RPM). PROVIDES ALL ITEMS NECESSARY TO CONVERT A LIMITING SPEED GOVERNOR INTO AN AIR OPERATED VARIABLE LOW SPEED GOVERNOR		AR	AR		AR	AR	AR		AR
	5149876	KIT, GOVERNOR CONVERSION (3000 RPM). PROVIDES ALL ITEMS NECESSARY TO CONVERT A LIMITING SPEED GOVERNOR INTO A VARIABLE LOW SPEED LIMITING SPEED CABLE OPERATED GOVERNOR		AR	AR		AR	AR	AR		AR
	8922901	KIT, GOVERNOR CONVERSION (2000 RPM TO 3000 RPM). PROVIDES ALL ITEMS NECESSARY TO CONVERT A LIMITING SPEED GOVERNOR INTO AN AIR OPERATED DUAL HIGH SPEED GOVERNOR		AR	AR		AR	AR	AR		AR

## 2.7000A MECHANICAL GOVERNOR

PART			TYPES							
FIG	NUMBER	NAME AND DESCRIPTION	1	1	1	1	1	1	1	1
			6	7	7	8	8	8	8	8
			0	3	9	4	5	7	7	7
			1	1	3	3	6	6	7	8
<b>2.7312 - LINK, GOVERNOR OPERATING LEVER CONNECTING</b>										
4A	<b>8920421</b>	LINK (LONG)	1	1	1	1	1			
4A	<b>8920420</b>	LINK (SHORT)	1	1	1	1	1			
4B	<b>8924640</b>	LINK (LONG)						1	1	1
4B	<b>8924639</b>	LINK (SHORT)						1	1	1
4A,B	<b>103361</b>	PIN, 1/16"X1/2" COTTER (12.9250)	2	2	2	2	2	2	2	2
4A,B	<b>5147345</b>	PIN, 1/4"X.776"	2	2	2	2	2	2	2	2
	<b>120423</b>	LOCKWASHER, 1/4" (12.9220)	2	2	2	2	2			
<b>2.7832 - TUBE, CYLINDER HEAD GOVERNOR CONTROL LINK</b>										
4A	<b>8920387</b>	TUBE (LONG)	1	1	1	1	1			
4A,B	<b>8920384</b>	TUBE (SHORT)	1	1	1	1	1	2	2	2
4A,B	<b>8920399</b>	GASKET (1.2060)	2	2	2	2	2	2	2	2
4A,B	<b>8920403</b>	BOLT, M8 X1.25X20.0 MM (W/NYLON PATCH) (1.2050)	2	2	2	2	2	2	2	2
	<b>1262788</b>	STUD, M8 X1.25X20.0 MM X 15.0 MM	2	2	2	2	2	2	2	2
<b>2.7834 - BOOT, GOVERNOR TO INJECTOR LINK</b>										
4A	<b>8920306</b>	+ BOOT, 66MM L.	2	2	2	2	2			
4B	<b>8924641</b>	BOOT, 127.0 MM L.						1	1	1
4B	<b>8924642</b>	BOOT, 74.0 MM L.						1	1	1
4A	<b>8922121</b>	CLAMP, 25 MM	4	4	4	4	4			
4B	<b>1627086</b>	CLAMP, 28.8 MM						4	4	4
		+ NOT SERVICED, USE 8924642 BOOT AND (2) 1627086 CLAMPS.								
<b>2.7980 - SPRING, THROTTLE BOOSTER</b>										
4E,F	<b>8922807</b>	SPRING			1			1		

## 2.7000A MECHANICAL GOVERNOR

PART FIG NUMBER NAME AND DESCRIPTION			COLUMN									
			A	B	C	D	E	F	G	H	I	J
<b>2.7001 - GOVERNOR ASSY.</b>												
4A,B	<b>8921800</b>	* GOVERNOR ASSY., LIM. SPD. (3000 RPM)	1									
4A,B	<b>8921820</b>	* GOVERNOR ASSY., LIM. SPD. (3000 RPM)		1								
4A,B	<b>8922347</b>	* GOVERNOR ASSY., LIM. SPD. (2800 RPM)			1							
4A,B	<b>8923672</b>	* GOVERNOR ASSY., LIM. SPD. (3000 RPM)				1						
4A,B	<b>8923675</b>	GOVERNOR ASSY., LIM. SPD. (2800 RPM)					1					
	<b>8922870</b>	GOVERNOR ASSY., VAR. SPD. (800-3400 RPM)						1				
4A,B	<b>8924346</b>	GOVERNOR ASSY., LIM. SPD. (3000 RPM)							1			
4A,B	<b>8924644</b>	GOVERNOR ASSY., LIM. SPD. (2600-3200 RPM)								1		
	<b>8924646</b>	GOVERNOR ASSY., VAR. SPD. (3000-3400 RPM)									1	
4A,B	<b>8924645</b>	GOVERNOR ASSY., LIM. SPD. (3200 RPM)										1
		* NOT SERVICED, SHOWN FOR REFERENCE ONLY.										
<b>2.7002 - NAME PLATE, GOVERNOR</b>												
4C,D,E,F	<b>5113056</b>	NAME PLATE	1	1	1	1	1	1	1	1	1	1
<b>2.7045 - COVER ASSY., GOVERNOR-COMplete</b>												
		INCLUDES ITEMS IN 2.7045, 2.7095, 2.7115 AND 2.7140.										
4C,D	<b>8920327</b>	COVER ASSY.	1	1	1	1	1		1	1		1
4E,F	<b>8922699</b>	COVER ASSY.						1			1	
4G	<b>5180539</b>	GASKET, COPPER (2.9333)	1	1	1	1	1	1				
4G	<b>456390</b>	PIN, SPRING (12.9275)	2	2	2	2	2		2	2		2
	<b>453676</b>	PIN, 1/8"X1" SPRING (12.9275)						1			1	
4G	<b>11505077</b>	BOLT, M16 X 2.0 X 25.0 MM (12.9001)	1	1	1	1	1	1	1			
4C,D,E,F	<b>11503781</b>	+ BOLT, M6 X 1.0 X 20.0 MM (12.9001)	4	4	4	4	4	4	4	4	4	4
4C,D,E,F	<b>11505078</b>	+ BOLT, M6 X 1.0 X 45.0 MM (12.9001)	2	2	2	2	2	2	2	2	2	2
	<b>5152148</b>	WASHER, COPPER (2.4050)	1	1	1			1				
		+ NOT PART OF ASSEMBLY.										
<b>2.7051 - GASKET, GOVERNOR COVER</b>												
4C,D,E,F	<b>8920290</b>	GASKET	1	1	1	1	1	1	1	1	1	1
<b>2.7095 - SHAFT ASSY., GOVERNOR THROTTLE</b>												
		INCLUDES PIN IN 2.7095.										
4G	<b>8920326</b>	SHAFT ASSY.	1	1	1	1	1		1	1		1
4G	<b>8922685</b>	SHAFT ASSY.						1			1	
	<b>453676</b>	PIN, 1/8"X1" SPRING (12.9275)	1	1	1	1	1	1	1	1	1	1
4G	<b>8922932</b>	WASHER, SPRING		1	1	1	1	1	1			

## 2.7000A MECHANICAL GOVERNOR

PART  
 .FIG . . . NUMBER . . . . . NAME AND DESCRIPTION . . . . .

COLUMN

## 2.7105 - LEVER, GOVERNOR THROTTLE SHAFT

	A	B	C	D	E	F	G	H	I	J
4A,B,G 8920859 LEVER	1	1	1	1	1		1	1		1
4A,B,G 179796 BOLT, 1/4"-20 X 7/8" (12.9001)	1	1	1	1	1		1	1		1
4A,B,G 103319 LOCKWASHER, 1/4" (12.9200)	1	1	1	1	1		1	1		1

## 2.7106 - LEVER, GOVERNOR THROTTLE STOP

4A,B,G 5113338 LEVER (2.9410)	1	1	1			1			1	
4A,B,G 179796 BOLT, 1/4"-20 X 7/8" (12.9001)	1	1	1			1			1	
4A,B,G 103319 LOCKWASHER, 1/4" (12.9200)	1	1	1			1			1	

## 2.7115 - SHAFT ASSY., GOVERNOR SHUTDOWN

INCLUDES PIN IN 2.7115.

4G 8920325 SHAFT ASSY.	1	1	1	1	1	1	1	1	1	1
4G 8922932 WASHER, SPRING	2	2	2	2	2	1	2	2	1	2
4G 8921204 SPACER (2.7165)	1	1	1	1	1	1	1	1	1	1
4G 455972 PIN, ROLL (12.9275)	1	1	1	1	1	1	1	1	1	1

## 2.7140 - WASHER, GOVERNOR THROTTLE SHAFT

4G 5151487 WASHER (2.7430)	2	2	2	2	2	1	2	2	1	2
4G 5144178 RETAINER (2.7155)	2	2	2	2	2	1	2	2	1	2
4G 5101691 SEAL, RING	2	2	2	2	2	1	2	2	1	2
4G 5178581 RING, RETAINER (2.7430)	2	2	2	2	2	1	2	2	1	2

## 2.7230 - HOUSING ASSY., GOVERNOR CONTROL

INCLUDES ITEMS IN 2.7230, 2.7235 AND 2.7300.

4C,D 8921821 + HOUSING ASSY.	1									
4C,D 8921807 + HOUSING ASSY.		1	1							
4C,D 8922346 HOUSING ASSY.				1	1		1	1		1
4E,F 8922953 HOUSING ASSY.						1			1	
8920309 * COVER	1	1								
8920310 * GASKET, COVER	1	1								
4C,D,E,F 5150942 PIN, DOWEL	2	2	2	2	2	2	2	2	2	2
4C,D,E,F 138106 PLUG, 1/2" EXPANSION (12.9330)	1	1	1	1	1	1	1	1	1	1
5141578 SPACER, .545" O.D. X .328" I.D. X .389" THK. (3.4180)	1	1	1							
11503781 BOLT, M6 X 1.0 X 20.0 MM (12.9001)	3	3	3							
+ NOT SERVICED, USE 8922346 HOUSING ASSY.										
* OBSOLETE.										

## 2.7235 - HOUSING, GOVERNOR CONTROL

8921802 * RIVET	2									
8921799 SPACER	1									
4C,D,E,F 8921809 SPACER		1	1	1	1	1	1	1	1	1
* NOT SERVICED, USE 9438951 AND (1) 120391 WASHER.										

## 2.7000A MECHANICAL GOVERNOR

PART FIG . . . NUMBER . . . . . NAME AND DESCRIPTION . . . . .	COLUMN									
	A	B	C	D	E	F	G	H	I	J
<b>2.7250 - SHAFT ASSY., GOVERNOR OPERATING</b> INCLUDES ITEMS IN 2.7255 AND BEARING IN 2.7260.										
<b>8920339</b> SHAFT ASSY. . . . .	1	1	1							
<b>2.7255 - SHAFT, GOVERNOR OPERATING</b>										
4C,D,E,F <b>8920298</b> SHAFT . . . . .	1	1	1	1	1	1	1	1	1	1
<b>2.7260 - BEARING, GOVERNOR OPERATING SHAFT-UPPER</b>										
4C,D,E,F <b>9431894</b> BEARING . . . . .	1	1	1	1	1	1	1	1	1	1
<b>2.7280 - LEVER, GOVERNOR OPERATING SHAFT-UPPER</b>										
4C,D,E,F <b>8920297</b> LEVER . . . . .	1	1	1	1	1	1	1	1	1	1
4C,D,E,F <b>5150898</b> SCREW (GAP ADJUSTING) . . . . .	1	1	1	1	1	1	1	1	1	1
4C,D,E,F <b>9421917</b> SCREW & LOCKWASHER ASSY. (12.9025) . . . . .		1	1	1	1	1	1	1	1	1
4C,D,E,F <b>120391</b> WASHER, 3/16" (12.9190) . . . . .		1	1	1	1	1	1	1	1	1
4C,D,E,F <b>114492</b> NUT, LOCK 1/4"-28 (12.9120) . . . . .	1	1	1	1	1	1	1	1	1	1
<b>2.7290 - FORK, GOVERNOR OPERATING SHAFT-LOWER</b>										
4C,D,E,F <b>8920299</b> FORK . . . . .	1	1	1	1	1	1	1	1	1	1
4C,D,E,F <b>9425382</b> SCREW, #10-32 X 5/8" (12.9001) . . . . .	2	2	2	2	2	2	2	2	2	2
<b>2.7300 - PIN, GOVERNOR OPERATING SHAFT LEVER</b>										
4C,D,E,F <b>8922095</b> PIN, EQUALIZING 7.83M.M.X32.0M.M. L. . . . .	1	1	1	1	1	1	1	1	1	1
4C,E <b>142583</b> RETAINER, SPRING (12.9640) . . . . .	1	1	1	1	1	1	1			
<b>2.7301 - SHAFT, GOVERNOR YIELD</b>										
4C,D,E,F <b>8920287</b> SHAFT . . . . .	1	1	1	1	1	1	1	1	1	1
4C,D,E,F <b>8920291</b> COUPLING (TO DIFFERENTIAL LEVER) . . . . .	1	1	1	1	1	1	1	1	1	1
4C,D,E,F <b>9413225</b> RING, RETAINER . . . . .	1	1	1	1	1	1	1	1	1	1
4C,D,E,F <b>8920303</b> WASHER . . . . .	1	1	1	1	1	1	1	1	1	1
<b>2.7302 - SPRING, GOVERNOR YIELD LINK</b>										
4C,D,E,F <b>8920302</b> SPRING . . . . .	1	1	1	1	1	1	1	1	1	1
<b>2.7310 - LEVER AND PIN ASSY., GOVERNOR DIFFERENTIAL</b>										
4C,D,E,F <b>5122744</b> LEVER . . . . .		1	1	1	1	1	1	1	1	1

## 2.7000A MECHANICAL GOVERNOR

PART		COLUMN									
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I
		<b>2.7315 - PIN, GOVERNOR DIFFERENTIAL LEVER</b>									
4C,D,E,F	<b>5122745</b>	PIN .....	1	1	1	1	1	1	1	1	1
		<b>2.7330 - CARRIER AND WEIGHT ASSY., GOVERNOR</b>									
		INCLUDES ITEMS IN 2.7360, 2.7370, 2.7410, 2.7420, 2.7430 AND 2.7470.									
4C,D	<b>8921801</b>	+ WEIGHT ASSY. ....	1								
	<b>8921806</b>	WEIGHT ASSY. ....		1	1	1	1		1	1	1
4E,F	<b>8922669</b>	WEIGHT ASSY. ....						1			1
		+ NOT SERVICED, USE 8921806 CARRIER AND WEIGHT ASSY. AND 8922346 HOUSING ASSY.									
		<b>2.7360 - SHAFT, GOVERNOR WEIGHT CARRIER</b>									
4H	<b>8921803</b>	SHAFT .....	1								
	<b>8921786</b>	SHAFT .....		1	1	1	1	1	1	1	1
		<b>2.7370 - CARRIER, GOVERNOR WEIGHT SHAFT</b>									
4H	<b>8920305</b>	CARRIER .....	1								
	<b>8921787</b>	CARRIER .....		1	1	1	1	1	1	1	1
		<b>2.7380 - RISER, GOVERNOR</b>									
4C,D,E,F	<b>5117193</b>	RISER .....	1	1	1	1	1	1	1	1	1
		<b>2.7410 - WEIGHT, GOVERNOR HIGH SPEED</b>									
4H	<b>8920329</b>	WEIGHT .....	2	2	2	2	2		2	2	2
		<b>2.7420 - WEIGHT, GOVERNOR LOW SPEED</b>									
4H	<b>8920328</b>	WEIGHT .....	2	2	2	2	2		2	2	2
4H	<b>8922668</b>	WEIGHT .....					2			2	
		<b>2.7430 - PIN, GOVERNOR WEIGHT</b>									
4H	<b>5122786</b>	PIN (RING GROOVE) .....	4	4	4	4	4	2	4	4	2
4H	<b>9411504</b>	RING, RETAINER .....	4	4	4	4	4	2	4	4	2
		<b>2.7460 - BEARING, GOVERNOR WEIGHT RISER THRUST</b>									
4C,D,E,F	<b>9437108</b>	BEARING (SINGLE ROW) .....	1	1	1	1	1	1	1	1	1
		<b>2.7470 - BEARING, GOVERNOR WEIGHT SHAFT END</b>									
4C,D,E,F	<b>907045</b>	BEARING .....	1	1	1	1	1	1	1	1	1



## 2.7000A MECHANICAL GOVERNOR

			COLUMN									
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J
		<b>2.7480 - RING, GOVERNOR WEIGHT SHAFT END BEARING SNAP</b>										
4H	<b>11505282</b>	RING, SNAP		1	1	1	1	1	1	1	1	1
4C,D,E,F	<b>9411502</b>	RING, SNAP (1 9/16") (2.7470)		1		1	1	1	1	1	1	1
		<b>2.7520 - COVER, GOVERNOR WEIGHT HOUSING</b>										
4C,D,E,F	<b>8920296</b>	COVER (FUEL PUMP ADAPTOR)	1	1	1	1	1	1	1	1	1	1
4C,D,E,F	<b>11504471</b>	BOLT, M8X1.25X25.0 MM (12.9001)	2	2	2	2	2	2	2	2	2	2
4C,D,E,F	<b>11504563</b>	BOLT, M8X1.25X40.0 MM (12.9001)	2	2	2	2	2	2	2	2	2	2
		<b>2.7530 - GASKET, GOVERNOR WEIGHT HOUSING COVER</b>										
4C,D,E,F	<b>8920300</b>	GASKET	1	1	1	1	1	1	1	1	1	1
		<b>2.7540 - SPRING, GOVERNOR LOW SPEED</b>										
4C,D	<b>5122165</b>	SPRING (ONE BLUE STRIPE)	1	1	1	1	1			1		1
4C,D	<b>5183704</b>	SPRING (TWO YELLOW STRIPES)							1			
		<b>2.7550 - SPRING, GOVERNOR HIGH SPEED</b>										
4C,D	<b>8920304</b>	SPRING	1	1	1	1	1		1	1		1
4C,D	<b>8923544</b>	* SPRING	1	1	1	1	1		1	1		1
		* USE IN PLACE OF 8920304 WHEN A 2400 RPM RATING IS DESIRED.										
		<b>2.7560 - PLUNGER, GOVERNOR LOW SPEED SPRING</b>										
4C,D	<b>5182555</b>	PLUNGER	1	1	1	1	1		1	1		1
		<b>2.7570 - SEAT, GOVERNOR LOW SPEED SPRING</b>										
4C,D	<b>5150892</b>	SEAT	1	1	1	1	1		1	1		1
		<b>2.7580 - CAP, GOVERNOR LOW SPEED SPRING</b>										
4C,D	<b>5103975</b>	CAP	1	1	1	1	1		1	1		1
		<b>2.7590 - SCREW, GOVERNOR LOW SPEED SPRING ADJUSTING</b>										
4C,D	<b>5102270</b>	SCREW, 1/4"-28X1" HEX. SOC.	1	1	1	1	1		1	1		1
4C,D	<b>5101432</b>	PIN	1	1	1	1	1		1	1		1
4C,D	<b>114492</b>	NUT, 1/4"-28 (12.9120)	1	1	1	1	1		1	1		1
		<b>2.7610 - RETAINER, GOVERNOR HIGH SPEED SPRING</b>										
4C,D	<b>5182557</b>	RETAINER	1	1	1	1	1		1	1		1

## 2.7000A MECHANICAL GOVERNOR

PART		COLUMN									
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I
		<b>2.7615 - LOCKNUT, GOVERNOR HIGH SPEED SPRING RETAINER</b>									
4C,D	<b>5186115</b>	LOCKNUT	1	1	1	1	1		1	1	1
		<b>2.7635 - HOUSING, GOVERNOR HIGH SPEED SPRING ADJUSTING SCREW</b>									
4C,D	<b>5182559</b>	HOUSING	1	1	1	1	1		1	1	1
4C,D	<b>186270</b>	BOLT, 5/16"-18 X 3 1/2" (12.9001)	2	2	2	2	2		2	2	2
4C,D,E,F	<b>113699</b>	BOLT, 3/8"-24 X 1/2" (12.9001)	1	1	1	1	1	1	1	1	1
4C,D,E,F	<b>5152148</b>	WASHER, 3/8" COPPER (2.4050)	1	1	1	1	1	1	1	1	1
		<b>2.7650 - GASKET, GOVERNOR HIGH SPEED SPRING COVER</b>									
4C,D,E,F	<b>8922593</b>	GASKET	1	1	1	1	1	1	1	1	1
		<b>2.7680 - HOUSING ASSY., GOVERNOR VARIABLE SPEED SPRING</b>									
		INCLUDES ITEMS IN 2.7690 THRU 2.7750.									
	<b>8922885</b>	HOUSING ASSY.						1		1	
		<b>2.7690 - HOUSING, GOVERNOR VARIABLE SPEED SPRING</b>									
4E,F	<b>5145444</b>	HOUSING						1		1	
4E,F	<b>5126789</b>	PLUG, 5/8" CUP (12.9330)						1		1	
4E,F	<b>9417926</b>	BOLT, 1/4"-20X3/4" (12.9001)						1		1	
4E,F	<b>5143564</b>	BOLT, 1/4"-20X1 1/2" HEX. SKT. HD. IDLE SPEED ADJUSTING (12.9057)						1		1	
4E,F	<b>274856</b>	NUT, 1/4"-20 THIN (12.9120)						1		1	
		<b>2.7692 - COVER, GOVERNOR VARIABLE SPEED SPRING HOUSING</b>									
4E,F	<b>5145446</b>	COVER (2.7690)						1		1	
4E,F	<b>186270</b>	BOLT, 5/16"-18X3 1/2" (12.9001)						2		2	
4E,F	<b>103320</b>	LOCKWASHER, 5/16" (12.9200)						2		2	
		<b>2.7693 - GASKET, COVERING VARIABLE SPEED SPRING HOUSING COVER</b>									
4E,F	<b>5145445</b>	GASKET (2.7690)						1		1	
		<b>2.7712 - BEARING, GOVERNOR VARIABLE SPEED SPRING LEVER SHAFT</b>									
4E,F	<b>148402</b>	BEARING (2.7100)						2		2	

## 2.7000A MECHANICAL GOVERNOR

PART			COLUMN															
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J						
		<b>2.7720 - SHAFT, GOVERNOR VARIABLE SPEED SPRING LEVER</b>																
4E,F	<b>8922702</b>	SHAFT .....						1			1							
4E,F	<b>3291522</b>	SPACER, 1/2" (4.2460) .....						1			1							
4E,F	<b>103904</b>	KEY, 3/32"X1/2" WOODRUFF (12.9350) .....						2			2							
		<b>2.7730 - LEVER, GOVERNOR VARIABLE SPEED SPRING</b>																
		A LEVER ASSY. INCLUDES LEVER NOT SOLD SEPARATELY, PLUS ITEMS IN 2.7732.																
4E,F	<b>5139469</b>	LEVER ASSY. ....						1			1							
4E,F	<b>223065</b>	SCREW, 5/16"-24X1/4" SET (12.9076) .....						1			1							
4E,F	<b>5143665</b>	WASHER (PACKING RETAINER) .....						1			1							
		<b>2.7732 - BEARING, GOVERNOR VARIABLE SPEED SPRING LEVER</b>																
4E,F	<b>5139468</b>	BEARING .....						1			1							
4E,F	<b>9425165</b>	PIN, 1/4"X.61" .....						1			1							
		<b>2.7750 - PACKING, GOVERNOR VARIABLE SPEED SPRING LEVER SHAFT</b>																
4E,F	<b>5176557</b>	SEAL RING .....						1										
		<b>2.7760 - SPRING, GOVERNOR VARIABLE SPEED</b>																
4E,F	<b>8924137</b>	SPRING (ONE WHITE STRIPE) .....						1			1							
		<b>2.7770 - PLUNGER, GOVERNOR VARIABLE SPEED SPRING</b>																
4E,F	<b>5162661</b>	PLUNGER .....						1			1							
		<b>2.7780 - GUIDE, GOVERNOR VARIABLE SPEED SPRING PLUNGER</b>																
4E,F	<b>5130093</b>	GUIDE .....						1			1							
4E,F	<b>5130094</b>	BUSHING (PLASTIC) .....						1			1							
		<b>2.7790 - RETAINER, GOVERNOR VARIABLE SPEED SPRING</b>																
4E,F	<b>5137276</b>	RETAINER .....						1			1							
		<b>2.7795 - STOP, GOVERNOR VARIABLE SPEED SPRING RETAINER</b>																
4E,F	<b>5171784</b>	STOP (WITH STEP) .....						1			1							

## 2.7000A MECHANICAL GOVERNOR

PART  
 .FIG . . . NUMBER . . . . . NAME AND DESCRIPTION . . . . .

			COLUMN									
			A	B	C	D	E	F	G	H	I	J
<b>2.7800 - SHIM, GOVERNOR VARIABLE SPEED SPRING</b>												
4E,F	<b>5136590</b>	SHIM, .010" . . . . .						4			4	
4E,F	<b>5136591</b>	SHIM, .078" . . . . .						2			2	
<b>2.7810 - SCREW ASSY., GOVERNOR BUFFER</b>												
4C,D	<b>8920294</b>	SCREW ASSY. (INCLUDES SPRING) . . . . .	1	1	1	1	1		1	1		1
4C,D	<b>5174286</b>	NUT, 3/8"-24 LOCK (12.9140) . . . . .	1	1	1	1	1		1	1		1
<b>2.7811 - BOLT, MANUAL SHUTDOWN STOP</b>												
4E,F	<b>8923379</b>	BOLT, 3/8"-24X3.175" . . . . .						1			1	
4E,F	<b>5152148</b>	WASHER, 3/8" COPPER (2.4050) . . . . .						1			1	
<b>2.7902 - LEVER ASSY., GOVERNOR CONTROL LINK HOUSING OPERATING</b>												
4C,D,E,F	<b>8920318</b>	LEVER . . . . .	1	1	1	1	1	1				
	<b>8924515</b>	LEVER . . . . .								1	1	1
<b>2.7905 - ROD, GOVERNOR CONNECTING</b>												
4C,D,E,F	<b>8921911</b>	ROD (LEFT BANK) . . . . .	1	1	1	1	1	1				
4C,D,E,F	<b>8921912</b>	ROD (RIGHT BANK) . . . . .	1	1	1	1	1	1				
	<b>8924638</b>	PIN, 70.5 MM . . . . .								1	1	1
	<b>8924637</b>	PIN, 46.5 MM . . . . .								1	1	1
	<b>5141578</b>	WASHER, 2 1/64" (3.4180) . . . . .						1				
4C,D,E,F	<b>8922898</b>	NUT, # 10-32 SPECIAL (LEFT BANK) . . . . .	1	1	1	1	1	1				
4C,D,E,F	<b>8921909</b>	NUT, # 10-32 SPECIAL (RIGHT BANK) (2.7902) . . . . .	1	1	1	1	1	2	1			
<b>2.7960 - GEAR, GOVERNOR DRIVE</b>												
4C,D,E,F	<b>8920190</b>	GEAR (26 TEETH) . . . . .	1	1	1	1	1	1	1	1	1	1
<b>2.7975 - BRACKET, THROTTLE BOOSTER SPRING</b>												
4E,F	<b>8922808</b>	BRACKET . . . . .						1			1	
4E,F	<b>8922966</b>	BOLT, M6X1.0X30.0 MM . . . . .						3			3	
<b>2.7977 - LEVER, THROTTLE BOOSTER SPRING</b>												
4E,F	<b>5124615</b>	LEVER (2.9410) . . . . .						1			1	
4E,F	<b>179796</b>	BOLT, 1/4"-20X7/8" (12.9001) . . . . .						1			1	
4E,F	<b>103319</b>	LOCKWASHER, 1/4" (12.9200) . . . . .						1			1	
<b>2.7982 - EYE, THROTTLE BOOSTER ADJUSTING</b>												
4E,F	<b>8923380</b>	SCREW . . . . .						1			1	
4E,F	<b>106261</b>	WASHER, 5/16" (12.9190) . . . . .						1			1	
4E,F	<b>114493</b>	LOCKNUT, 5/16"-24 (12.9190) . . . . .						2			2	

[illegible]

A HANGER ASSY. INCLUDES ITEMS (\*) IN 2.7985.

	<b>5134696</b>	HANGER ASSY. (2.9349)
4E,F	<b>5134694</b>	* ROLLER ASSY. (INCLUDES BUSHING)
		(2.9349)
	<b>5134692</b>	BUSHING (2.9349)
4E,F	<b>274676</b>	* RING, RETAINING
4E,F	<b>5134695</b>	* BOLT, 5/16"-24X1.60" (2.9349)
4E,F	<b>106261</b>	* WASHER, 5/16" (12.9190)
4E,F	<b>120393</b>	WASHER, 5/16" (12.9190)
4E,F	<b>114493</b>	LOCKNUT, 5/16" (2.7170)

[illegible]

## 2.9000 INJECTOR CONTROLS

PART			TYPES									
FIG	NUMBER	NAME AND DESCRIPTION	2	9	7							
<b>2.9003 - BRACKET, INJECTOR CONTROL TUBE</b>												
5A	<b>8920350</b>	BRACKET	4									
5A	<b>8920435</b>	BOLT, M8 X 1.25 X 20.0 MM 12 PT. HD.	4									
<b>2.9006 - SHAFT, INJECTOR CONTROL-MAIN</b>												
5A	<b>8920208</b>	SHAFT	2									
<b>2.9009 - LEVER, INJECTOR CONTROL TUBE</b>												
5A	<b>8920212</b>	LEVER	2									
5A	<b>8920435</b>	BOLT, M8 X 1.25 X 20.0 MM 12 PT. HD. (2.9003)	2									
<b>2.9011 - SPRING, INJECTOR CONTROL TUBE THROTTLE</b>												
5A	<b>8921715</b>	SPRING	2									
<b>2.9012 - SPRING, INJECTOR CONTROL TUBE</b>												
5A	<b>8926733</b>	SPRING	8									
<b>2.9014 - LEVER, INJECTOR CONTROL TUBE RACK</b>												
5A	<b>8920789</b>	LEVER	8									
5A	<b>8921124</b>	CLIP, NUT #10-32	8									
5A	<b>8921220</b>	SCREW, #10-32 X .330"	2									
5A	<b>8920349</b>	SCREW, #10-32 X 1/2" SPL	6									

## 2.9000A THROTTLE CONTROLS

[illegible]

**2.9410 - LEVER, GOVERNOR CONTROL**

5113338	LEVER .....	1
179796	BOLT, 1/4"-20X7/8" (12.9001) .....	1
103319	LOCKWASHER, 1/4" (12.9200) .....	1

## TYPES

## GROUP NOMENCLATURE

1.0000	ENGINE (less major assemblies)	5.0000	COOLING SYSTEM (CONT'D)
1.1000	Cylinder Block	5.4000B	Fan Shroud
1.1000A	Air Box Drains	5.5000A	Heat Exchanger or Keel Cooling
1.2000	Cylinder Head	5.6000A	Raw Water Pump
1.2000A	Engine Lifter Bracket	5.7000A	Water Filter
1.3000	Crankshaft, Oil Seals and Stabilizers		
1.3000A	Crankshaft Front Cover	6.0000	EXHAUST SYSTEM
1.3000B	Vibration Damper	6.1000A	Exhaust Manifold and/or Connections
1.3000C	Crankshaft Pulley	6.2000A	Exhaust Muffler and/or Connections
1.3000D	Crankshaft Pulley Belt		
1.4000A	Flywheel	7.0000	ELECTRICAL - INSTRUMENTS
1.5000A	Flywheel Housing	7.1000A	Battery Charging Generator
1.5000B	Flywheel Housing Adaptor	7.2000A	Battery Cables
1.6000	Connecting Rod and Piston	7.2000B	Automatic Starting
1.7000	Camshaft and Gear Train	7.2000B	Automatic Starting (Twin and Quad)
1.7000A	Balance Weight Cover	7.3000A	Starting Motor
1.7000B	Accessory Drive	7.4000A	Instruments
1.8000	Valve and Injector Operating Mechanism	7.4000A	Instruments (Twin and Quad)
1.8000A	Rocker Cover	7.4000B	Tachometer Drive
		7.4000B	Tachometer Drive (Twin and Quad)
		7.4000C	Shutoff, Alarm and O.S. Governor
		7.4000C	Shutoff, Alarm and O.S. Governor (Twin and Quad)
		7.5000A	Power Generator
		7.6000A	Control Cabinet
		7.6000A	Control Cabinet (Twin and Quad)
		7.7000A	Wiring Harness
		7.8000A	Air Heater
		7.8000A	Air Heater (Twin and Quad)
		7.10000A	Hydraulic Governor Solenoid
2.0000	FUEL SYSTEM	8.0000	POWER TAKE-OFF
2.1000A	Fuel Injector	8.1000A	Power Take-off and/or Clutch
2.2000	Fuel Pump	8.1000A	Power Take-off and/or Clutch (Twin and Quad)
2.2000A	Fuel Pump Drain	8.3000A	Torque Converter
2.3000A	Fuel Filter and Strainer	8.3000A	Torque Converter (Twin and Quad)
2.3000A	Fuel Filter and Strainer (Twin and Quad)	8.3000B	Transmission Lines
2.4000	Fuel Manifold and/or Connections		
2.4000A	Dual Fuel System	9.0000	TRANSMISSION AND PROPULSION
2.5000A	Fuel Lines and Fuel Cooler	9.1000A	Hydraulic Marine Gear
2.5000A	Fuel Lines and Fuel Cooler (Twin and Quad)	9.1000A	Hydraulic Marine Gear (Twin and Quad)
2.6000A	Fuel Tank	9.2000A	Reverse and Reduction Gear (mechanical)
2.6000B	Electric Governor	9.3000A	Power Transfer Gear
2.7000A	Mechanical Governor	9.3000A	Power Transfer Gear (Twin and Quad)
2.8000A	Hydraulic Governor	9.4000	Transmission—Highway
2.9000	Injector Controls	9.7000	Transmission—Off-highway
2.9000	Injector Controls (Twin and Quad)	9.9000	Transmission—Rail Car
2.9000A	Throttle Controls		
2.9000A	Throttle Controls (Twin and Quad)	10.0000	SHEET METAL
		10.1000A	Engine Hood
3.0000	AIR SYSTEM		
3.1000A	Air Cleaner and/or Adaptor	11.0000	ENGINE MOUNTING
3.2000A	Air Silencer	11.1000A	Engine Mounting and Base
3.3000A	Air Inlet Housing	11.1000A	Engine Mounting and Base (Twin and Quad)
3.4000	Blower and Drive		
3.4000A	Blower Drive Shaft	12.0000	MISCELLANEOUS
3.4000B	Blower End Plate Cover	12.2000A	Bilge Pump
3.5000A	Turbocharger, Intercooler, and Aftercooler	12.3000A	Vacuum Pump
		12.4000A	Air Compressor
4.0000	LUBRICATING SYSTEM	12.5000A	Hydraulic Pump
4.1000A	Oil Pump	12.6000A	Gasoline Starter
4.1000B	Oil Distribution System	12.6000B	Air Starter
4.1000C	Oil Pressure Regulator	12.6000C	Cold Weather Starting Aid
4.2000A	Oil Filter	12.6000D	Hydraulic Starter
4.3000A	Oil Filter Lines	12.6000E	Hydraulic Starter Accessories
4.4000A	Oil Cooler and Marine Gear Lines	12.8000A	Supplies
4.5000A	Oil Filler	12.8000B	Fabrication Material
4.6000A	Dipstick	12.8000C	Miscellaneous Service Kits and Sets
4.7000A	Oil Pan	12.8000D	Miscellaneous Service Parts
4.8000A	Ventilating System		
5.0000	COOLING SYSTEM		
5.1000	Fresh Water Pump		
5.1000A	Fresh Water Pump Cover		
5.2000A	Water Outlet Manifold and/or Elbow		
5.2000B	Thermostat		
5.2000C	Water Bypass Tube		
5.3000A	Radiator		
5.3000B	Water Connections		
5.4000A	Fan		



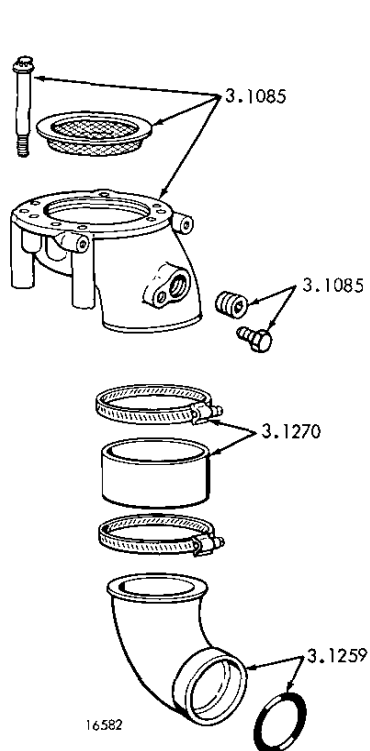


FIG. 1A AIR CLEANER ADAPTOR (TURBO)

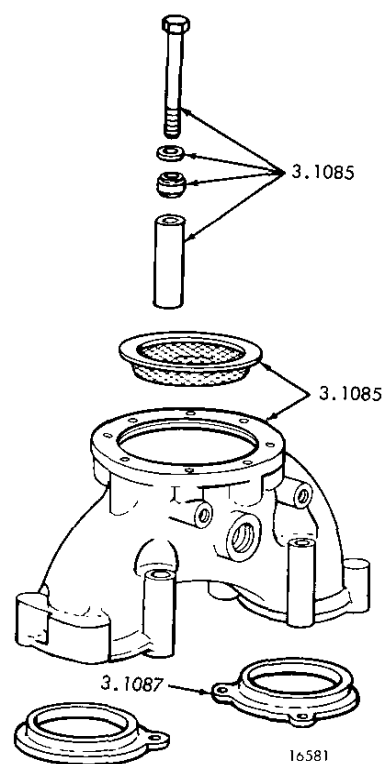


FIG. 1B AIR CLEANER ADAPTOR (NA)

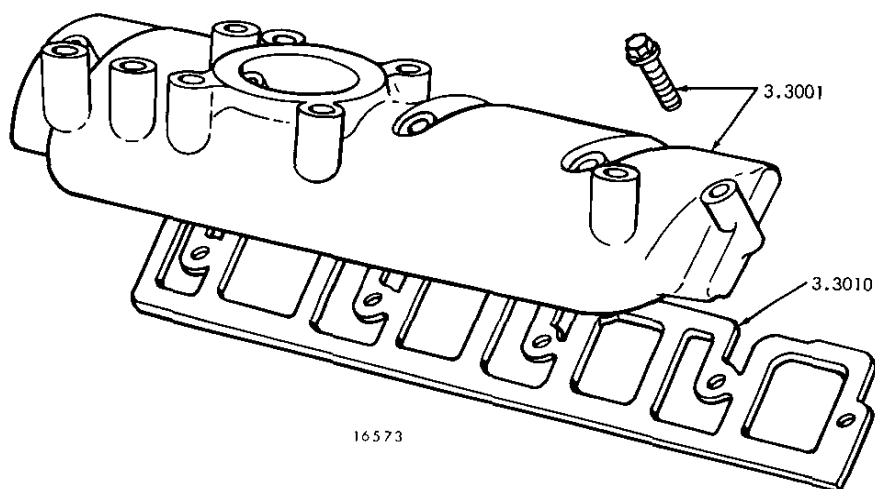


FIG. 2A AIR INLET HOUSING

Fig. 1A, 1B & 2A of 3.0000

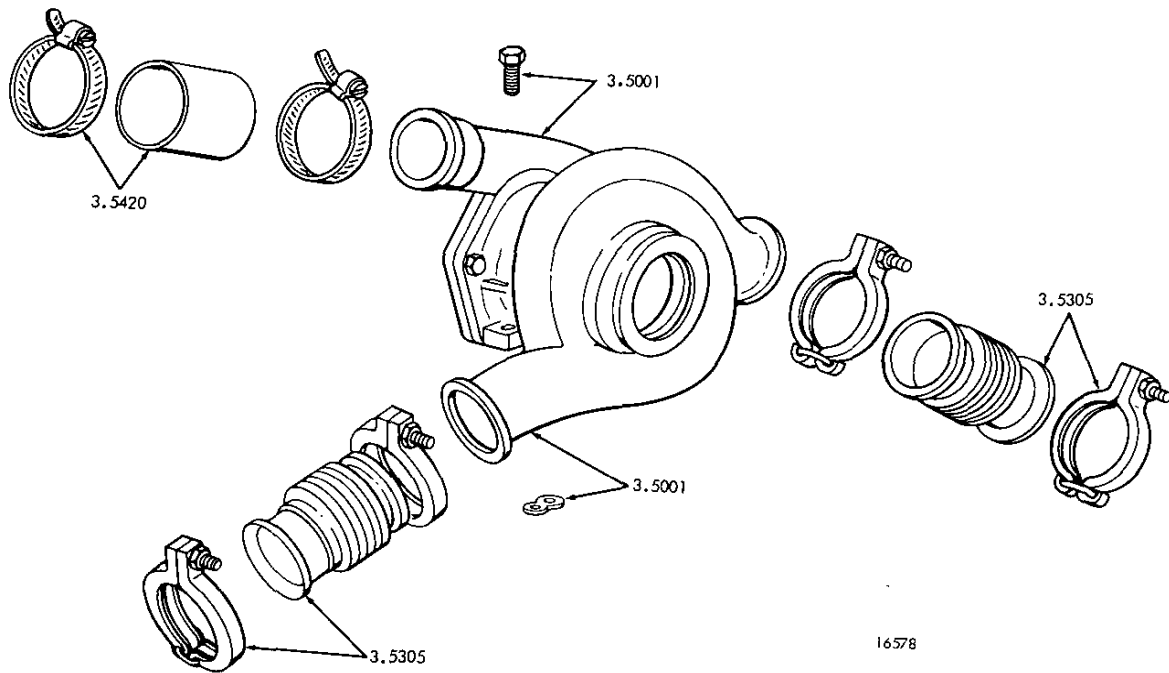


FIG. 3A TURBOCHARGER ASSEMBLY

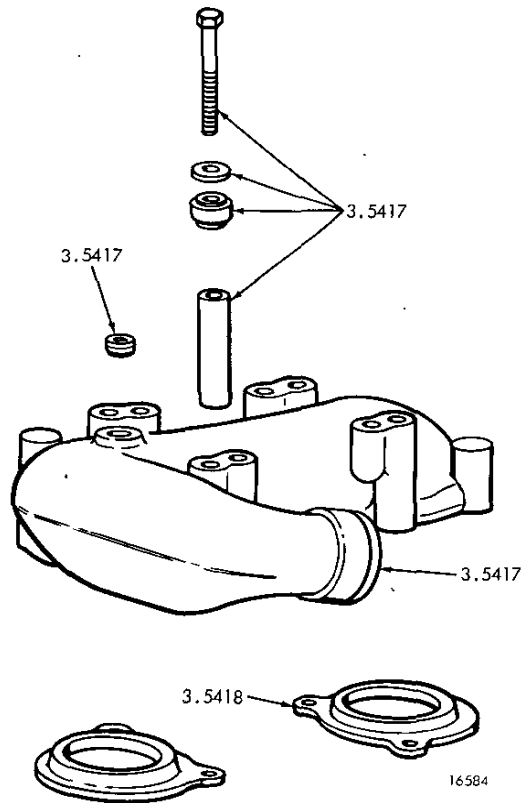


FIG. 3B AIR OUTLET ELBOW

Figs. 3A & 3B of 3.0000

Jan., 1980

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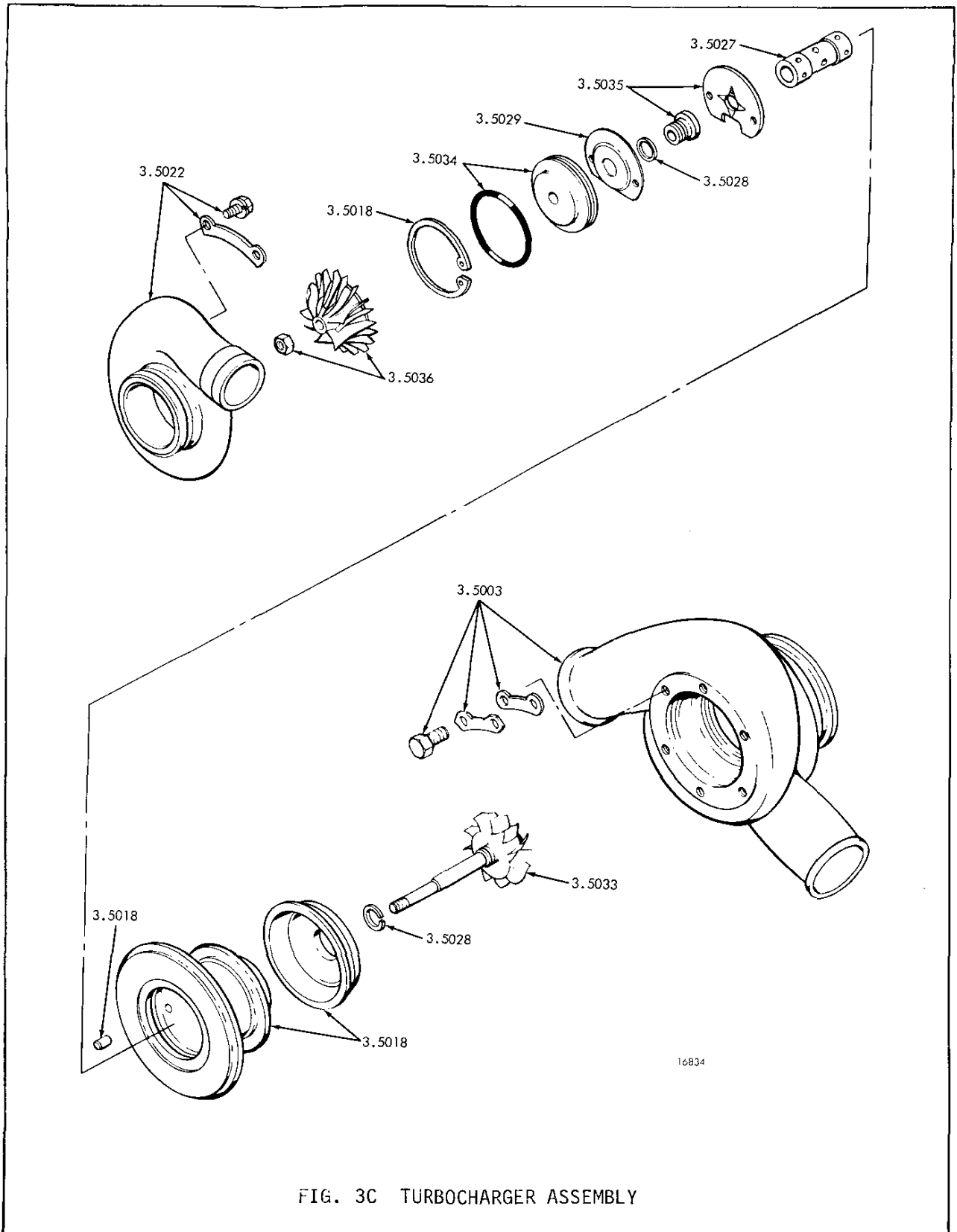


FIG. 3C TURBOCHARGER ASSEMBLY

Fig. 3C of 3.0000

Jan., 1980

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## 3.1000A AIR CLEANER AND/OR ADAPTOR

PART FIG NUMBER NAME AND DESCRIPTION			TYPES				
			3 6 5	3 6 6	3 7 2	3 7 3	3 7 5
<b>3.1085 - ADAPTOR, AIR CLEANER MOUNTING</b>							
1A	8922956	ADAPTOR (TURBO)	1				1
1B	8922957	ADAPTOR (NON-TURBO)		1	1		
	8923120	ADAPTOR (NON-TURBO)				1	
	5127238	ELBOW					1
1A,B	8920732	SCREEN	1	1			1
	8927214	SCREEN (NON-TURBO; CLOSED BREATHER SYSTEM)			1		
1B	8921711	SLEEVE		4	4		
	8922980	PLUG, CUP 1" (12.9320)	1	1			
1A	8922304	PLUG, 1/8" PIPE (12.9550)	1	1	1		1
1A	5142549	PLUG, 3/4" PIPE (12.9550)	1	1	1		1
	11505269	BOLT, M8X1.25X55.0 MM (12.9001)				4	
	11507013	BOLT, M8X1.25X100.0 MM (12.9001)				4	
1B	11505223	BOLT, M8X1.25X120.0 MM (12.9001)		4	4		
1B	8921710	ISOLATOR		4	4		
	8920438	BOLT, M10X1.5X30.0 MM (2.7001)					4
1A	8921426	BOLT, M10X1.5X100.0 MM 12 PT. HD.	4				4
1B	5181062	WASHER, .39"X.94"X.120" (5.1080)		4	4		
<b>3.1087 - GASKET, AIR CLEANER MOUNTING ADAPTOR</b>							
1B	8921883	GASKET ASSY. (3.5418)		2	2		
	8922876	GASKET				2	
	5127247	GASKET					1
<b>3.1259 - ELBOW, TURBOCHARGER AIR INLET</b>							
1A	8920258	ELBOW	1				1
1A	8920203	SEAL RING	1				1
<b>3.1270 - HOSE, AIR INLET PIPE</b>							
1A	5125281	HOSE, 4" I.D. X 8" L. (CUT L. 2.26")	1				1
1A	5118393	CLAMP (4 1/2" DIA.) (12.9660)	2				2

## 3.2000A AIR SILENCER

PART		TYPES											
..FIG ..	NUMBER .....	NAME AND DESCRIPTION .....	5	9	6	0							
<b>3.2001 - SILENCER, AIR</b>													
<b>8923123</b>	SILENCER .....		1	1									
<b>3.2013 - CLAMP, AIR SILENCER MOUNTING</b>													
<b>8924286</b>	CLAMP .....		1	1									
<b>8924291</b>	SLEEVE, LONG .....		1										
<b>8924356</b>	SLEEVE, SHORT .....			1									
<b>11500429</b>	BOLT, M8X1.25X90.0 MM (12.9001) .....		1										
<b>11500427</b>	BOLT, M8X1.25X65.0 MM (12.9001) .....			1									
<b>11500191</b>	LOCKWASHER, M8 (12.9200) .....		1	1									
<b>11501066</b>	NUT, M8X1.25 (12.9190) .....		1	1									
<b>3.2017 - HOSE, TURBO TO AIR SILENCER</b>													
<b>5125281</b>	+ HOSE, 4"X2.26"L. (3.1270) .....		1	1									
	+ STD. LENGTH HOSE, CUT TO LENGTH SHOWN.												
<b>3.2018 - CLAMP, TURBO TO AIR SILENCER HOSE</b>													
<b>5118393</b>	CLAMP, HOSE (12.9660) .....		2	2									

## 3.3000A AIR INLET HOUSING

PART		NAME AND DESCRIPTION	TYPES											
FIG	NUMBER		6	7										
			2	1										
			6	7										
3.3001 - HOUSING ASSY., AIR INLET														
2A	8920259	HOUSING ASSY. ....	2											
	8922317	HOUSING ASSY. ....		2										
2A	8922324	BOLT, M10X1.5X56.0 MM .....	10	10										
3.3010 - GASKET, AIR INLET HOUSING														
2A	8920247	GASKET .....	2	2										

## 3.5000A TURBOCHARGER, INTERCOOLER AND AFTERCOOLER

PART ..FIG .. NUMBER .. NAME AND DESCRIPTION ..			TYPES									
			4 4 3	6 9 3	6 9 4							
		<b>3.5001 - TURBOCHARGER</b>										
		SEE ASSEMBLY BREAKDOWN PAGE A1.										
3A	<b>8920678</b>	TURBOCHARGER ASSY. (SCHWITZER #L-18553)	1									
	<b>8923640</b>	TURBOCHARGER ASSY. (AIRESEARCH #466082-1)		1	1							
3A	<b>8923184</b>	SEAL, OIL (TURBO TO BLOCK)	1	1	1							
	<b>5111798</b>	PLUG, 1" PIPE (12.9550)		3	3							
3A	<b>11505281</b>	BOLT, M10 X 1.5 X 30 MM (11.1070)	2									
	<b>8925982</b>	STUD, M10X1.5X55.0 MM (12.9117)		4	4							
	<b>5108446</b>	WASHER, 13/16"X29/64"X.1046" (12.9190)		4	4							
	<b>11500586</b>	NUT, M10X1.5 (12.9120)		4	4							
		<b>3.5305 - CONNECTOR, TURBOCHARGER EXHAUST INLET</b>										
3A	<b>8920280</b>	TUBE (L. & R. BANK)	2									
	<b>8925106</b>	TUBE, CROSSOVER		1	1							
	<b>5111798</b>	PLUG, 1" PIPE (12.9550)		3	3							
3A	<b>8920206</b>	CLAMP, V BAND	4									
	<b>8920438</b>	BOLT, M10X1.5X30.0 MM (2.7001)		8	8							
		<b>3.5307 - GASKET, TURBOCHARGER EXHAUST INLET CONNECTION</b>										
	<b>8923133</b>	GASKET		2	2							
	<b>8925110</b>	GASKET		1	1							
		<b>3.5417 - ELBOW, TURBOCHARGER AIR OUTLET</b>										
3B	<b>8921516</b>	ADAPTOR	1									
	<b>8923120</b>	ADAPTOR		1	1							
3B	<b>8921711</b>	SLEEVE (3.1085)	4									
	<b>5121182</b>	PLUG, 1/4" PIPE (2.4015)	1									
	<b>11505269</b>	BOLT, M8X1.25X55.0 MM (12.9001)		4	4							
	<b>11507013</b>	BOLT, M8X1.25X100.0 MM (12.9001)		4	4							
	<b>11505223</b>	BOLT, M8X1.25X120.0 MM (12.9001)	4									
	<b>8921710</b>	ISOLATOR	4									
3B	<b>5181062</b>	WASHER, .39"X.94"X.120" (5.1080)	4									
		<b>3.5418 - GASKET, TURBOCHARGER AIR OUTLET ELBOW</b>										
3B	<b>8921883</b>	GASKET ASSY.	2									
	<b>8922876</b>	GASKET		2	2							
		<b>3.5420 - HOSE, TURBOCHARGER AIR OUTLET CONNECTION</b>										
3A	<b>5103399</b>	HOSE, 2 1/2" I.D. X 2 3/8" L.	1									
3A	<b>9139809</b>	CLAMP, HOSE 3" (12.9660)	2									

## 3.5000A TURBOCHARGER, INTERCOOLER AND AFTERCOOLER

PART ..FIG .. NUMBER .....	NAME AND DESCRIPTION .....	TYPES									
		4 4 3	6 9 3	6 9 4							
3.5422	ADAPTOR, TURBOCHARGER TO AIR INLET HOUSING										
8923484	CONNECTOR .....		1	1							
3.5424	HOSE, TURBOCHARGER AIR INLET CONNECTION										
5162888	HOSE, 3.50" I.D. X 3.75" L. (3.5420) .....		1	1							
5103399	HOSE, 2.50" I.D. X 3.375" L. (3.5420) .....		1	1							
9139813	CLAMP, 3.50" HOSE (3.5400) .....		2	2							
5102013	CLAMP, 2.50" HOSE (12.9660) .....		2	2							
3.5500	TUBE, TURBOCHARGER OIL SUPPLY										
8924384	HOSE .....		1								
5107855	HOSE ASSY., #6X22.5" L. (2.5149) .....			1							
NPN	ELBOW, 90 DEG. 3/8" TUBE .....		2	2							
5101020	STRAP, NYLON TIE (2.5255) .....		AR	AR							
3.5503	COVER, TURBOCHARGER OIL RETURN										
8923420	COVER, PORT .....		1								
8923563	COVER, STBD. .....			1							
8920438	BOLT, M10X1.5X30.0 MM (2.7001) .....		2	2							
3.5504	GASKET, TURBOCHARGER OIL RETURN COVER										
8923130	GASKET .....		1	1							
3.5505	TUBE, TURBOCHARGER OIL RETURN										
8923403	TUBE, PORT .....		1								
8923561	TUBE, STBD. .....			1							
5169721	HOSE, 7/8" (CUT L. 1.74") (4.8010) .....		1	1							
5104358	CLAMP, 1" (12.9660) .....		2	2							
179839	BOLT, 3/8"-16X1" (12.9001) .....		2	2							
103341	WASHER, 3/8" (12.9190) .....		2	2							
103321	LOCKWASHER, 3/8" (12.9200) .....		2	2							



## 3.5000A TURBOCHARGER, INTERCOOLER AND AFTERCOOLER

PART			COLUMN											
FIG	NUMBER	NAME AND DESCRIPTION	A	B										
<b>3.5001 - TURBOCHARGER</b>														
3A	8920678	TURBOCHARGER ASSY. (SCHWITZER #L-185533)	1											
	8923640	TURBOCHARGER ASSY. (AIRESEARCH #466082-1)		1										
<b>3.5003 - HOUSING, TURBOCHARGER TURBINE</b>														
3C	8921766	HOUSING ASSY. (INCLUDES PIN)	1											
	8927065	HOUSING ASSY. (INCLUDES PLUGS)		1										
3C	8921750	PLATE, LOCK	3											
3C	8921749	PLATE, CLAMP	3											
	5149554	CLAMP		3										
3C	8921753	SCREW, 5/16"-18X.828" (12.9001)	6											
	8927066	BOLT, 5/16"-18X1/2"		6										
<b>3.5018 - HOUSING ASSY., TURBOCHARGER INTERMEDIATE</b>														
3C	8921762	HOUSING ASSY. (INCLUDES PIN)	1											
	8927056	HOUSING ASSY.		1										
3C	8921759	HOUSING	1											
	8927057	HOUSING		1										
	8927059	SHROUD, WHEEL		1										
	5149543	BEARING, THRUST		1										
	5149356	PLATE, LOCK		2										
3C	8921756	RING, SNAP	1											
	8927061	BACKPLATE ASSY., TURBO		1										
	5198936	RING, SEAL		1										
	5149545	RING, RETAINING		4										
	5199620	PIN, .100" DIA. X 2.50" L.		2										
	8927058	BOLT, 5/16"-18X3/8"		4										
<b>3.5022 - HOUSING, TURBOCHARGER COMPRESSOR</b>														
3C	8921767	HOUSING	1											
	8927064	HOUSING		1										
3C	8921748	PLATE, CLAMP	3											
	5149551	CLAMP		1										
3C	8921754	SCREW ASSY., 1/4"-20 X .62" (W/LOCKWASHER)	6											
	8927058	BOLT, 5/16"-18X3/8"		4										
<b>3.5027 - BEARING, ROTOR ASSY. SHAFT</b>														
3C	8921765	BEARING	1											
	5149540	BEARING		2										
<b>3.5028 - SEAL, ROTOR ASSY. SHAFT OIL</b>														
3C	8921757	RING, SEAL (PISTON RING TYPE)	1											
3C	8921747	RING, SEAL (PISTON RING TYPE)	1											
	5149537	RING, SEAL (PISTON RING TYPE)		1										
	5149538	RING, SEAL (PISTON RING TYPE)		1										
<b>3.5029 - DEFLECTOR, ROTOR ASSY. SHAFT OIL</b>														
3C	8921758	DEFLECTOR, OIL	1											

## 3.5000A TURBOCHARGER, INTERCOOLER AND AFTERCOOLER

PART			COLUMN											
FIG	NUMBER	NAME AND DESCRIPTION	A	B										
<b>3.5033 - SHAFT ASSY., TURBOCHARGER ROTOR</b>														
3C	<b>8921760</b>	SHAFT ASSY. (INCLUDES INTEGRAL WHEEL) .....	1											
	<b>8927060</b>	SHAFT ASSY. (INCLUDES INTEGRAL WHEEL) .....		1										
<b>3.5034 - COLLAR, TURBOCHARGER ROTOR THRUST</b>														
3C	<b>8921763</b>	COLLAR .....	1											
	<b>5149547</b>	COLLAR .....		1										
3C	<b>8921755</b>	RING, SEAL .....	1											
<b>3.5035 - SPACER, TURBOCHARGER ROTOR THRUST</b>														
3C	<b>8921751</b>	SPACER .....	1											
3C	<b>8921761</b>	WASHER, THRUST .....	1											
<b>3.5036 - WHEEL, TURBOCHARGER COMPRESSOR</b>														
3C	<b>8921764</b>	WHEEL .....	1											
	<b>8927062</b>	WHEEL .....		1										
3C	<b>8921752</b>	NUT, 5/16"-24 .....	1											
	<b>8927063</b>	NUT, LOCK .....		1										

## GROUP NOMENCLATURE

1.0000	ENGINE (less major assemblies)	5.0000	COOLING SYSTEM (CONT'D)
1.1000	Cylinder Block	5.4000B	Fan Shroud
1.1000A	Air Box Drains	5.5000A	Heat Exchanger or Keel Cooling
1.2000	Cylinder Head	5.6000A	Raw Water Pump
1.2000A	Engine Lifter Bracket	5.7000A	Water Filter
1.3000	Crankshaft, Oil Seals and Stabilizers		
1.3000A	Crankshaft Front Cover	6.0000	EXHAUST SYSTEM
1.3000B	Vibration Damper	6.1000A	Exhaust Manifold and/or Connections
1.3000C	Crankshaft Pulley	6.2000A	Exhaust Muffler and/or Connections
1.3000D	Crankshaft Pulley Belt		
1.4000A	Flywheel	7.0000	ELECTRICAL--INSTRUMENTS
1.5000A	Flywheel Housing	7.1000A	Battery Charging Generator
1.5000B	Flywheel Housing Adaptor	7.2000A	Battery Cables
1.6000	Connecting Rod and Piston	7.2000B	Automatic Starting
1.7000	Camshaft and Gear Train	7.2000B	Automatic Starting (Twin and Quad)
1.7000A	Balance Weight Cover	7.3000A	Starting Motor
1.7000B	Accessory Drive	7.4000A	Instruments
1.8000	Valve and Injector Operating Mechanism	7.4000A	Instruments (Twin and Quad)
1.8000A	Rocker Cover	7.4000B	Tachometer Drive
		7.4000B	Tachometer Drive (Twin and Quad)
		7.4000C	Shutoff, Alarm and O.S. Governor
		7.4000C	Shutoff, Alarm and O.S. Governor (Twin and Quad)
2.0000	FUEL SYSTEM	7.5000A	Power Generator
2.1000A	Fuel Injector	7.6000A	Control Cabinet
2.2000	Fuel Pump	7.6000A	Control Cabinet (Twin and Quad)
2.2000A	Fuel Pump Drain	7.7000A	Wiring Harness
2.3000A	Fuel Filter and Strainer	7.8000A	Air Heater
2.3000A	Fuel Filter and Strainer (Twin and Quad)	7.8000A	Air Heater (Twin and Quad)
2.4000	Fuel Manifold and/or Connections	7.10000A	Hydraulic Governor Solenoid
2.4000A	Dual Fuel System		
2.5000A	Fuel Lines and Fuel Cooler	8.0000	POWER TAKE-OFF
2.5000A	Fuel Lines and Fuel Cooler (Twin and Quad)	8.1000A	Power Take-off and/or Clutch
2.6000A	Fuel Tank	8.1000A	Power Take-off and/or Clutch (Twin and Quad)
2.6000B	Electric Governor	8.3000A	Torque Converter
2.7000A	Mechanical Governor	8.3000A	Torque Converter (Twin and Quad)
2.8000A	Hydraulic Governor	8.3000B	Transmission Lines
2.9000	Injector Controls		
2.9000	Injector Controls (Twin and Quad)	9.0000	TRANSMISSION AND PROPULSION
2.9000A	Throttle Controls	9.1000A	Hydraulic Marine Gear
2.9000A	Throttle Controls (Twin and Quad)	9.1000A	Hydraulic Marine Gear (Twin and Quad)
		9.2000A	Reverse and Reduction Gear (mechanical)
3.0000	AIR SYSTEM	9.3000A	Power Transfer Gear
3.1000A	Air Cleaner and/or Adaptor	9.3000A	Power Transfer Gear (Twin and Quad)
3.2000A	Air Silencer	9.4000	Transmission--Highway
3.3000A	Air Inlet Housing	9.7000	Transmission--Off-highway
3.4000	Blower and Drive	9.9000	Transmission--Rail Car
3.4000A	Blower Drive Shaft		
3.4000B	Blower End Plate Cover	10.0000	SHEET METAL
3.5000A	Turbocharger, Intercooler, and Aftercooler	10.1000A	Engine Hood
4.0000	LUBRICATING SYSTEM	11.0000	ENGINE MOUNTING
4.1000A	Oil Pump	11.1000A	Engine Mounting and Base
4.1000B	Oil Distribution System	11.1000A	Engine Mounting and Base (Twin and Quad)
4.1000C	Oil Pressure Regulator		
4.2000A	Oil Filter	12.0000	MISCELLANEOUS
4.3000A	Oil Filter Lines	12.2000A	Bilge Pump
4.4000A	Oil Cooler and Marine Gear Lines	12.3000A	Vacuum Pump
4.5000A	Oil Filler	12.4000A	Air Compressor
4.6000A	Dipstick	12.5000A	Hydraulic Pump
4.7000A	Oil Pan	12.6000A	Gasoline Starter
4.8000A	Ventilating System	12.6000B	Air Starter
		12.6000C	Cold Weather Starting Aid
5.0000	COOLING SYSTEM	12.6000D	Hydraulic Starter
5.1000	Fresh Water Pump	12.6000E	Hydraulic Starter Accessories
5.1000A	Fresh Water Pump Cover	12.8000A	Supplies
5.2000A	Water Outlet Manifold and/or Elbow	12.8000B	Fabrication Material
5.2000B	Thermostat	12.8000C	Miscellaneous Service Kits and Sets
5.2000C	Water Bypass Tube	12.8000D	Miscellaneous Service Parts
5.3000A	Radiator		
5.3000B	Water Connections		
5.4000A	Fan		

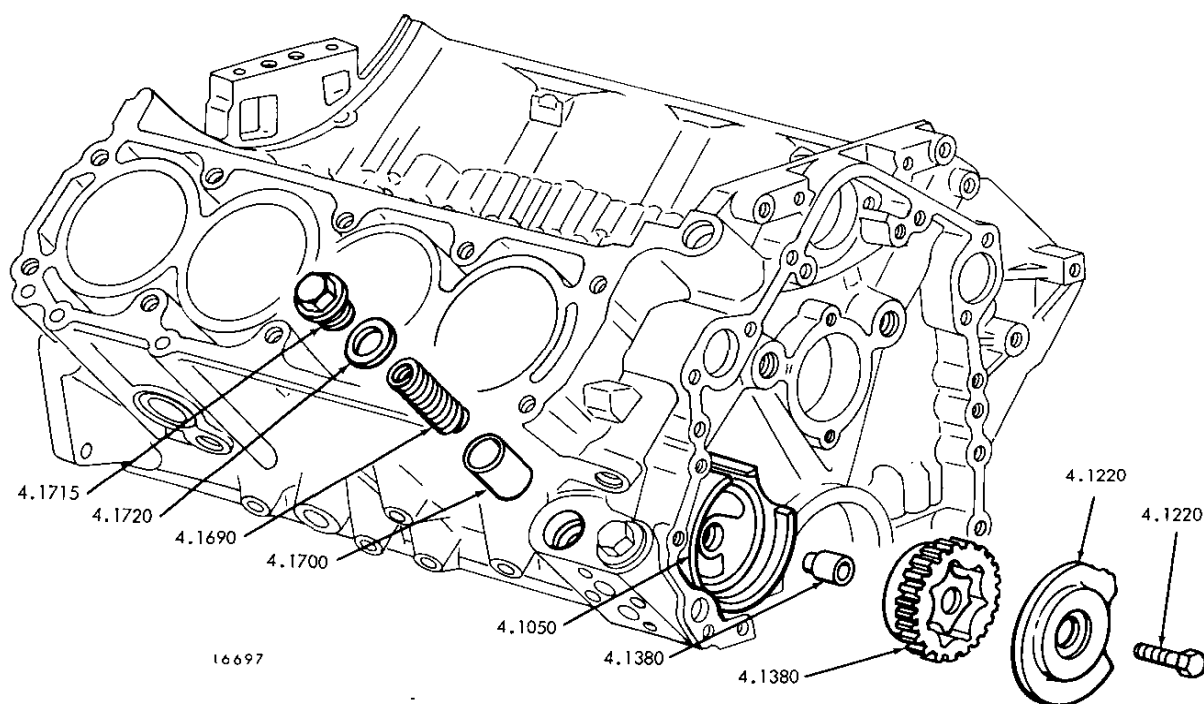


FIG. 1A OIL PUMP &amp; OIL PRESSURE REGULATOR VALVE

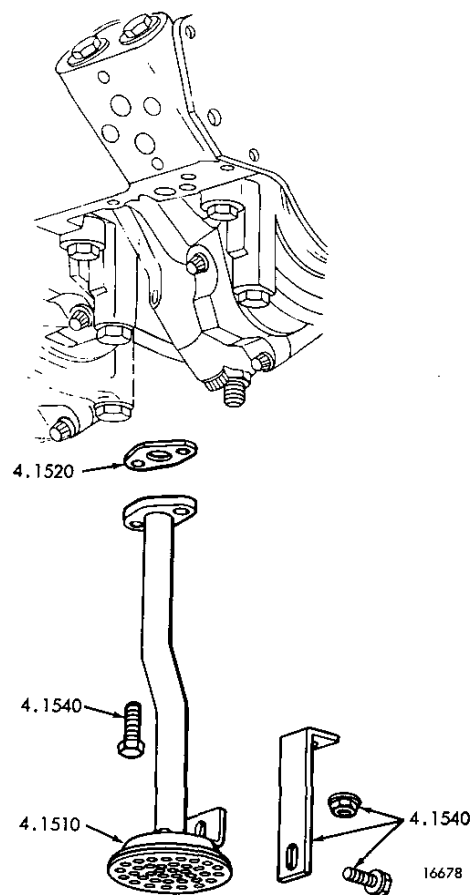


FIG. 1B OIL DISTRIBUTION

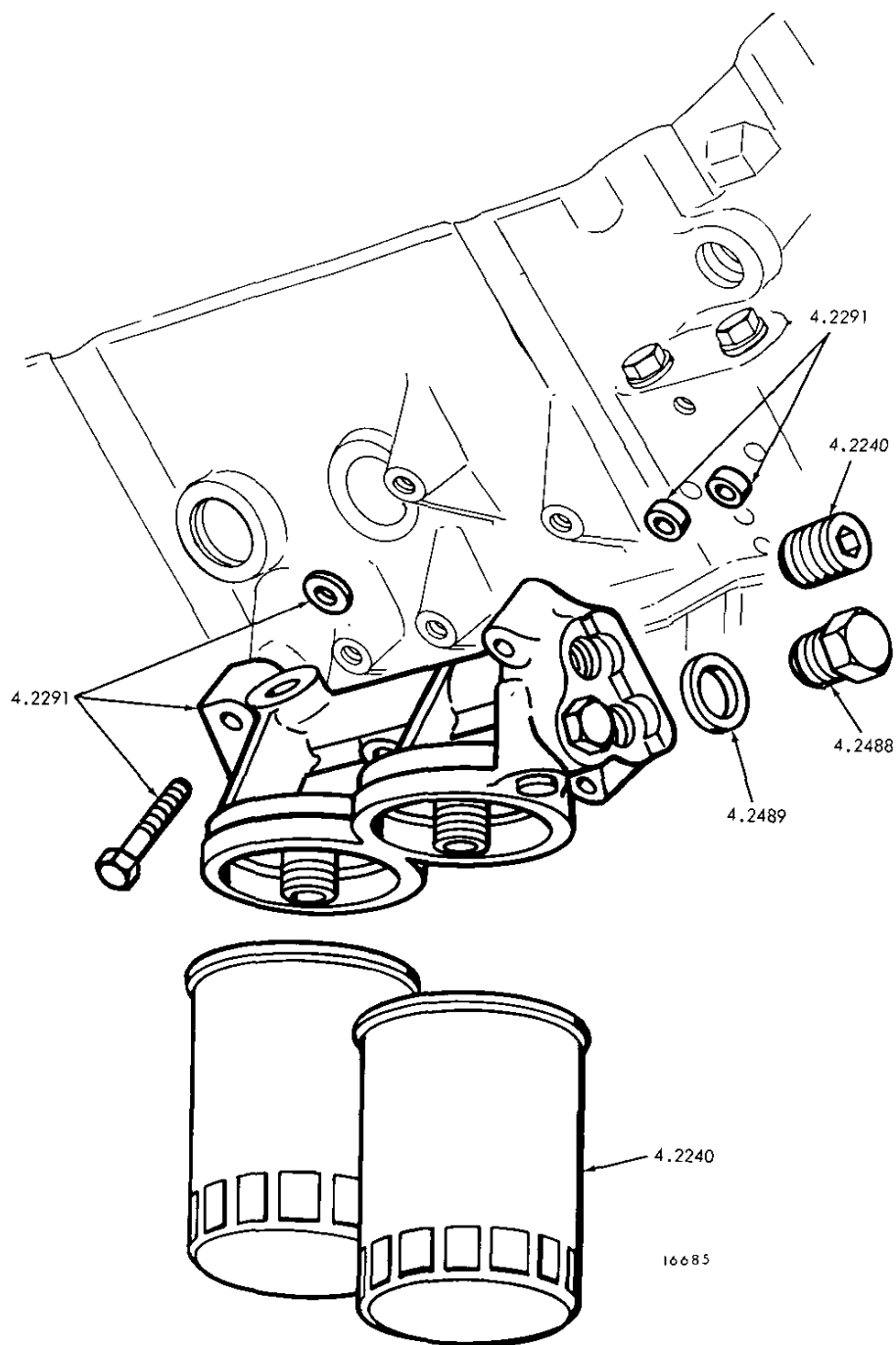


FIG. 2A OIL FILTER ADAPTOR &amp; FILTERS

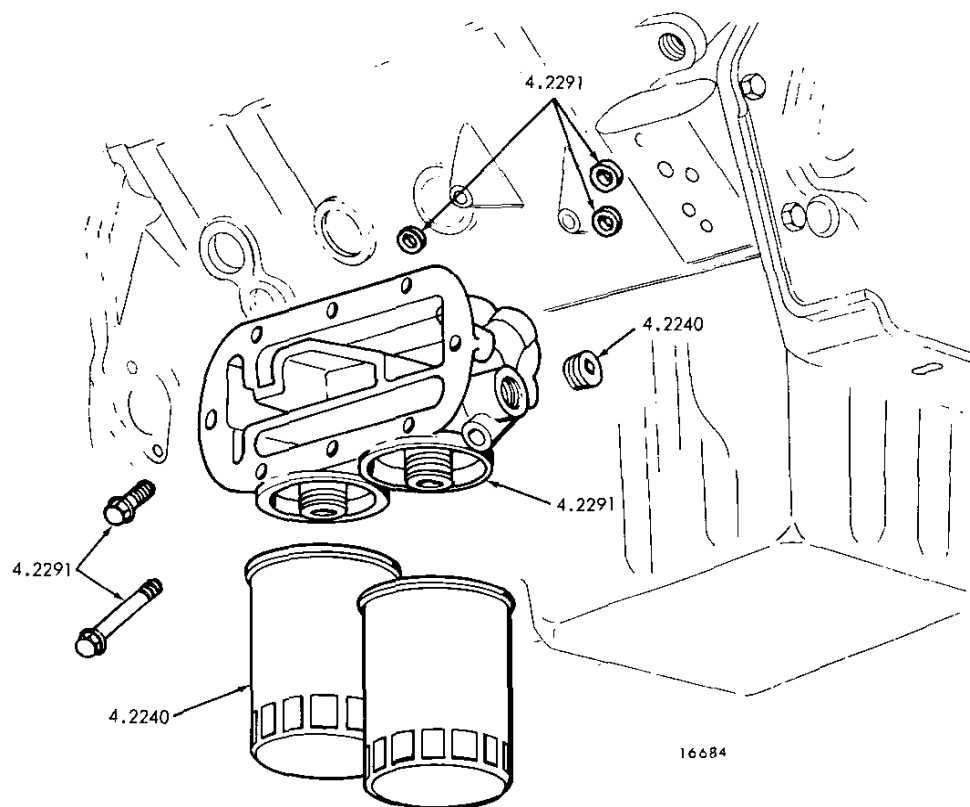


FIG. 2B OIL FILTER ADAPTOR &amp; FILTERS

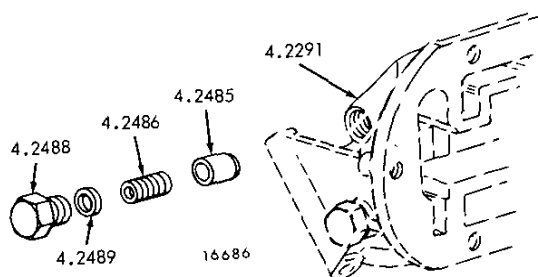


FIG. 2C OIL COOLER BY PASS VALVE

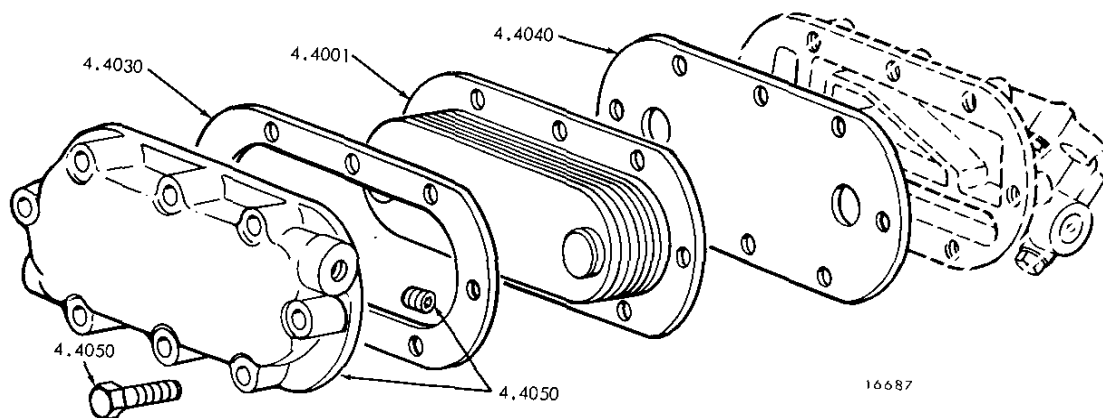


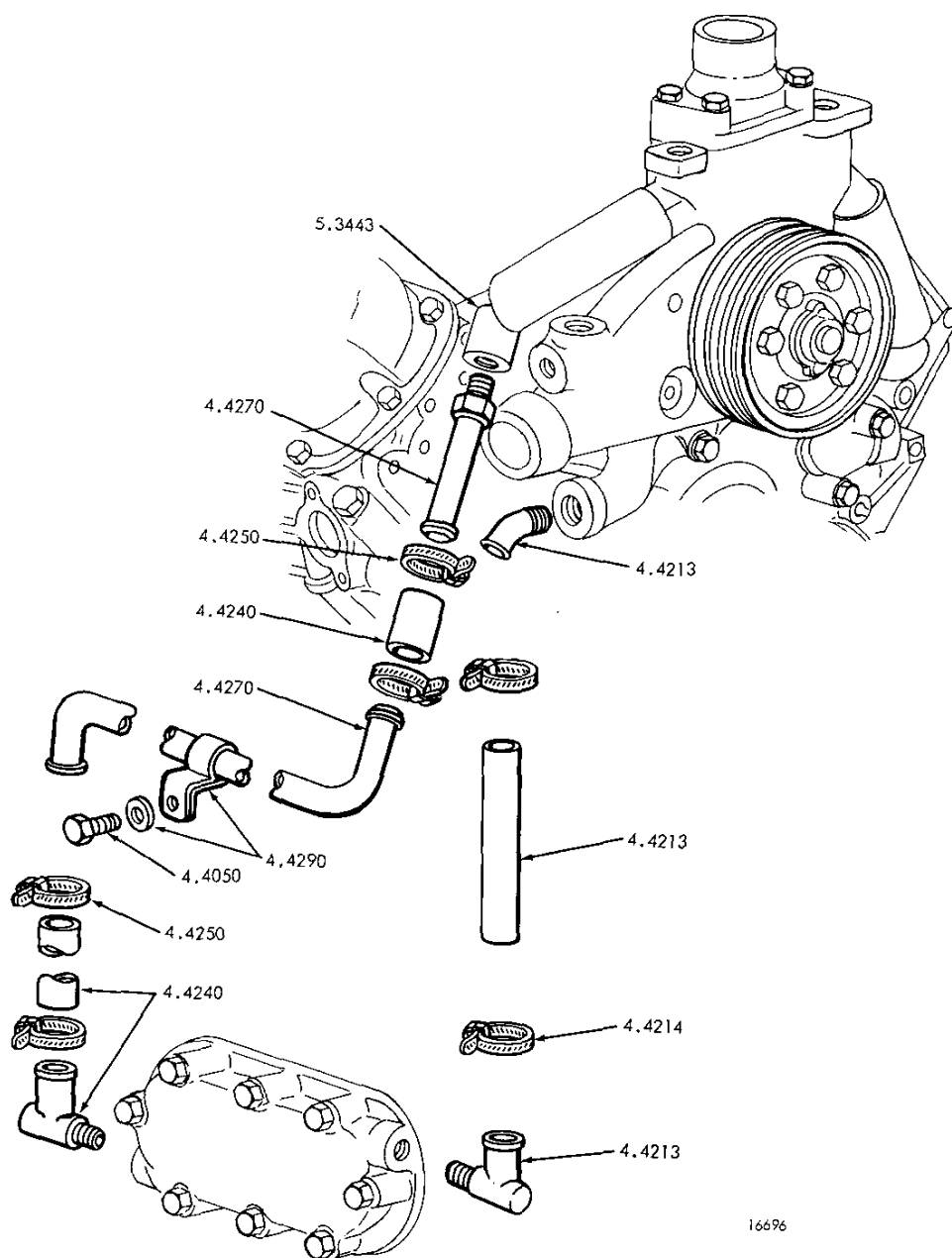
FIG. 3A OIL COOLER

Figs. 2C &amp; 3A of 4.0000

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FIG. 3C OIL COOLER WATER LINES

Fig. 3C of 4.0000

June, 1980

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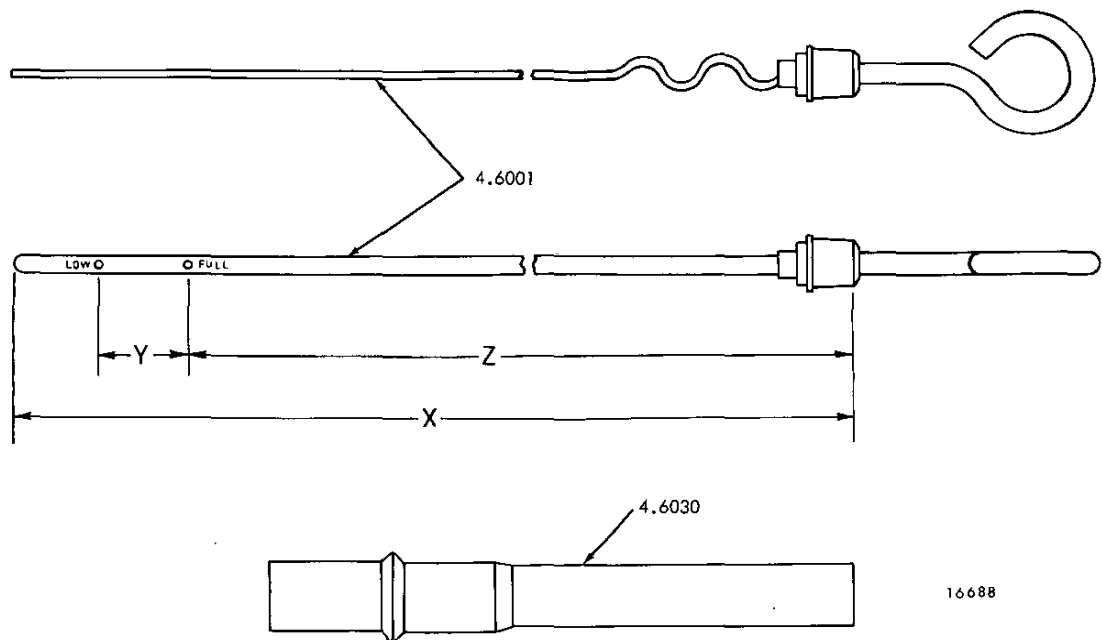


FIG. 4A DIPSTICK

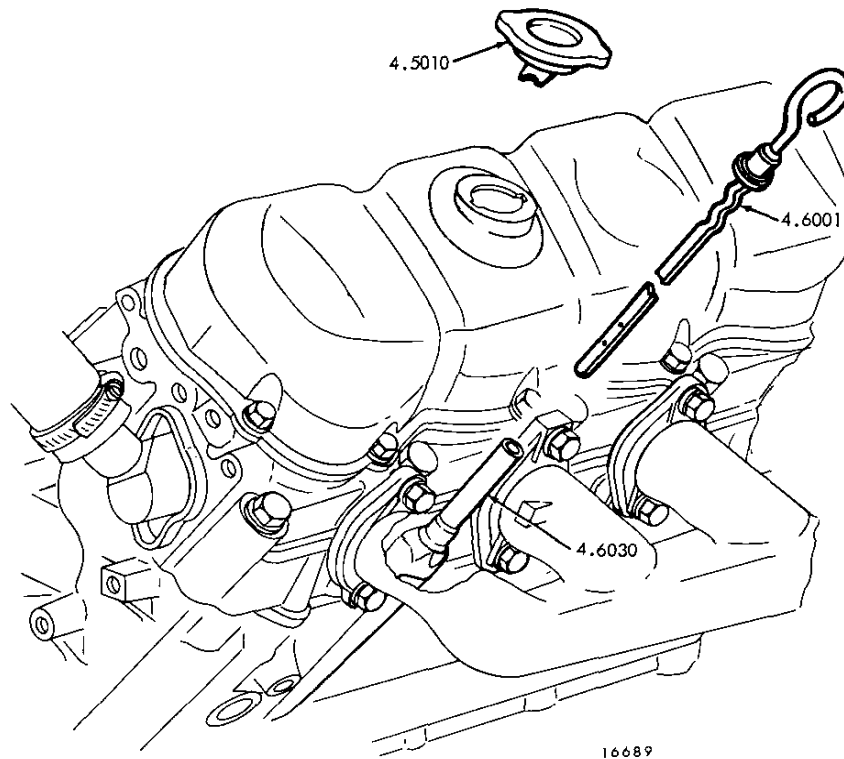


FIG. 4B DIPSTICK AND OIL FILLER CAP

Figs. 4A &amp; 4B of 4.0000

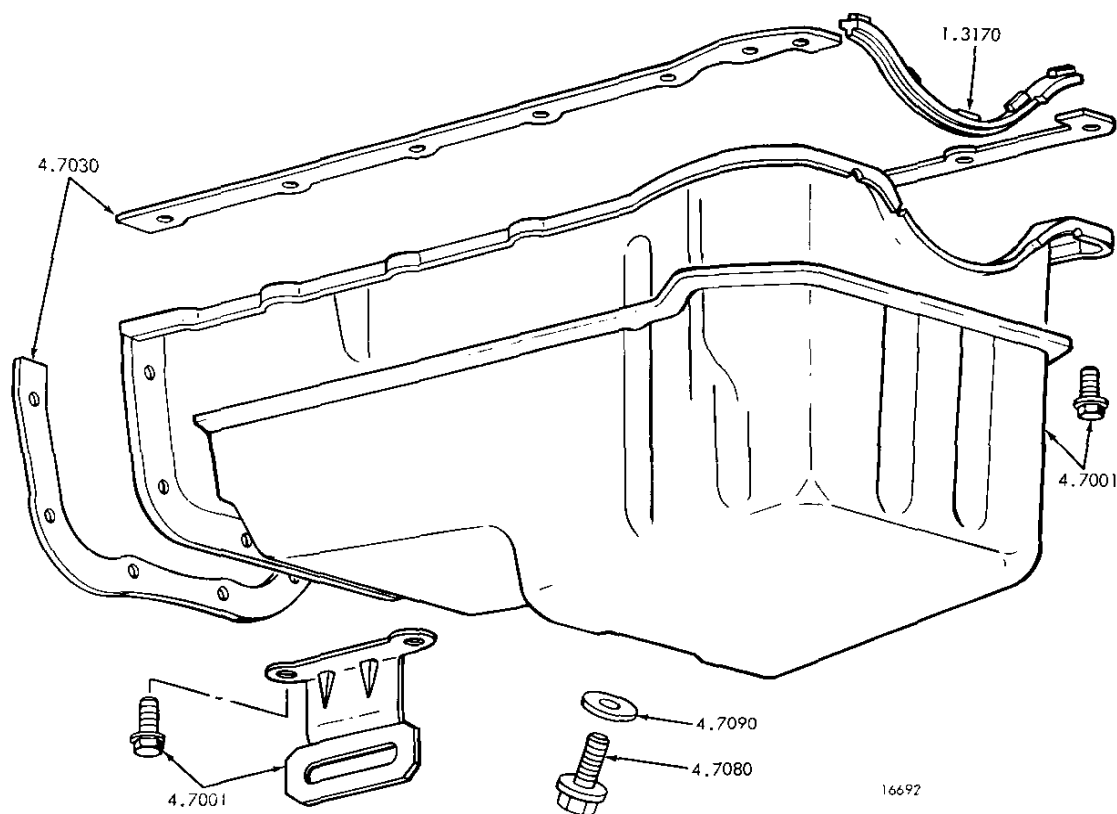


FIG. 5A OIL PAN ASSEMBLY

Fig. 5A of 4.0000

Jan., 1980

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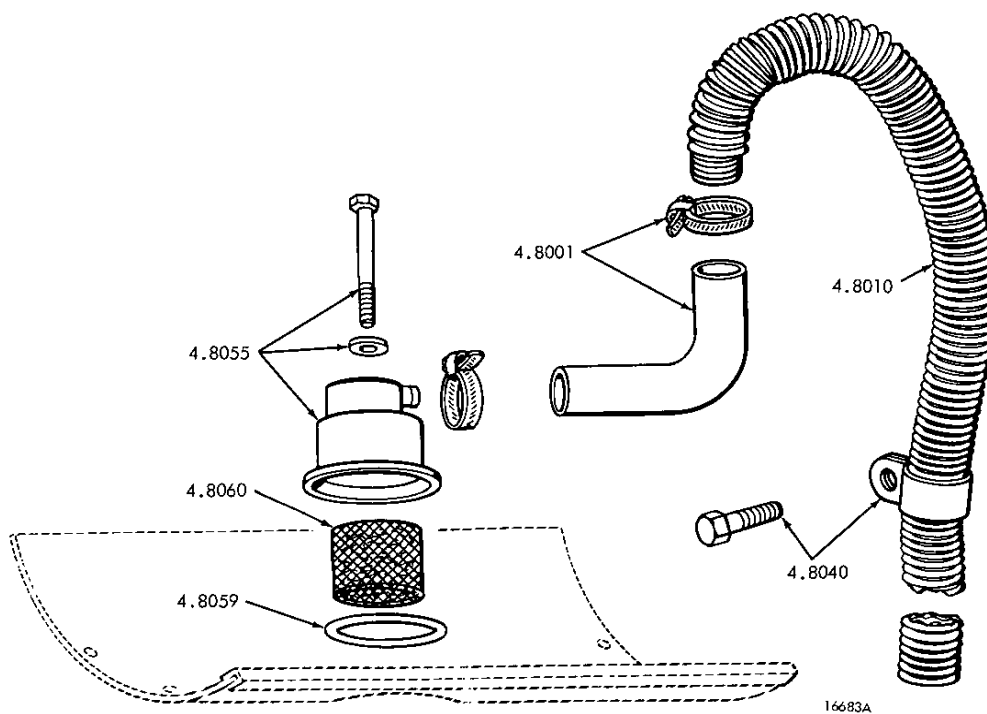


FIG. 6A VENTILATING SYSTEM

Fig. 6A of 4.0000

April, 1981

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## 4.1000A OIL PUMP

PART			TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	1	5	1									
4.1050 - BUSHING, OIL PUMP BODY														
1A	8922093	BUSHING (STD.)	1											
	8921673	BUSHING (.010" O.S.)	AR											
	8921672	BUSHING (.020" O.S.)	AR											
4.1220 - COVER, OIL PUMP														
1A	8920196	COVER	1											
1A	8922232	BOLT, M10 X 1.5 X 55.0 MM (12.9001)	1											
4.1380 - GEAR, OIL PUMP DRIVE-ON PUMP														
GEAR ASSY. INCLUDES (1) INNER AND (1) OUTER GEAR NOT SERVICED SEPARATELY.														
1A	8921173	GEAR ASSY., GEROTOR (45 TEETH)	1											
1A	8921203	HUB	1											

## 4.1000B OIL DISTRIBUTION SYSTEM

PART			TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	4	5	4	9	4	5						
<b>4.1510 - PIPE, OIL PUMP INLET</b>														
1B	8920423	PIPE .....	1											
	8925734	PIPE ASSY. ....			1									
1B	8924763	PIPE ASSY. ....					1							
1B	8920435	BOLT, M8X1.25X20.0 MM (2.9003) .....	2		2		2							
<b>4.1520 - GASKET, OIL PUMP INLET PIPE</b>														
1B	5126473	GASKET .....	1		1		1							
<b>4.1540 - BRACKET, OIL PUMP SCREEN SUPPORT</b>														
1B	8920426	BRACKET .....	1											
	8925735	BRACKET .....			1									
1B	8924764	BRACKET .....						1						
1B	11504505	BOLT, M8X1.25X20.0 MM (12.9001) .....			1		1							
1B	11502716	NUT, M8X1.25 MM (12.9120) .....	2											
1B	11502811	NUT, M8X1.25 MM (2.5220) .....			2		2							

## 4.1000C OIL, PRESSURE REGULATOR

PART			TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	2											
			5											
		4.1690 - SPRING, OIL PRESSURE REGULATOR												
1A	8920407	SPRING	2											
		4.1700 - VALVE, OIL PRESSURE REGULATOR												
1A	8920463	VALVE	2											
		4.1715 - PLUG, OIL PRESSURE RELIEF												
1A	8920405	PLUG, 1 1/4"-16	2											
		4.1720 - GASKET, OIL PRESSURE REGULATOR PLUG												
1A	5575086	GASKET (4.2489)	2											

#### 4.2000A OIL FILTER

PART			TYPES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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## 4.3000A OIL FILTER LINES

PART		TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11
			5										
		4.3001 - TUBE, OIL FILTER INLET											
	8924444	HOSE ASSY., #12X16" CUT L. ....	1										
	8924388	ELBOW, 90 DEG. (12.9390) .....	1										
		4.3020 - TUBE, OIL FILTER OUTLET											
	8924438	HOSE ASSY., #12X15" CUT L. ....	1										
	9402867	ELBOW, 90 DEG. (4.4335) .....	1										
		4.3045 - CLIP, OIL FILTER LINES											
	2419766	CLIP, 1.06" DIA. (4.8040) .....	2										
	8920438	BOLT, M10X1.5X30.0 MM (2.7001) .....	1										
	11501052	NUT, M10X1.5 (12.9120) .....	1										

## 4.4000A OIL COOLER AND MARINE GEAR LINES

PART			TYPES																
FIG	NUMBER	NAME AND DESCRIPTION	8 6 8	9 8 3	1 0 4	1 0 7 9	1 0 8 1	1 0 8 3	1 0 9 3	1 0 9 9	1 1 0 0								
4.4001 - CORE, OIL COOLER-ENGINE																			
3A	8547194	CORE ASSY. (4 PLATE)	1		1	1	1	1											
3A	8547577	CORE ASSY. (6 PLATE)		1					1	1									
3A	8547549	CORE ASSY. (8 PLATE)									1								
4.4030 - GASKET, OIL COOLER CORE-INNER																			
3A	5150155	GASKET	1	1	1	1	1	1	1	1	2								
4.4040 - GASKET, OIL COOLER CORE-OUTER																			
3A	5102506	GASKET	1	1	1	1	1	1	1	1	1								
4.4050 - HOUSING, OIL COOLER-ENGINE																			
3A	8920116	HOUSING	1		1		1				1								
3A	8923181	HOUSING		1							1								
	8927359	HOUSING AND TUBE ASSY.				1		1											
	8926474	HOUSING AND TUBE ASSY.							1										
	5129499	SPACER, OIL COOLER ELEMENT								1									
	8923847	PLUG, 1/4" PIPE HEX. SOC. (4.7001)				1		1	1		1								
3A	8924517	PLUG, 3/8"-18 PIPE (12.9550)	1		1		1				1	1							
	118536	DRAINCOCK, 3/8" (12.9510)		1															
	11500776	BOLT, M8X1.25X60.0 MM (12.9001)				8		8											
3A	11500427	BOLT, M8X1.25X65.0 MM (12.9001)	8		8														
3A	11500721	BOLT, M8X1.25X75.0 MM (12.9001)		8						8	8								
	11505212	BOLT, M8X1.25X95.0 MM (12.9001)									8								
4.4110 - ADAPTOR, OIL COOLER																			
	8923180	ADAPTOR		1															
	8920439	BOLT, M10X1.5X40.0 MM (4.2291)		2															
	11508044	BOLT, M10X1.5X110.0 MM (12.9001)		2															
	5152148	WASHER, 3/8" COPPER (2.4050)		1															
4.4115 - GASKET, OIL COOLER ADAPTOR TO BLOCK																			
	8920180	SEAL RING (4.2291)		4															
	8920849	SEAL RING (4.2291)		1															
4.4140 - VALVE, OIL COOLER BYPASS																			
	5132707	VALVE (4.1700)		2															
4.4150 - SPRING, OIL COOLER BYPASS VALVE																			
	8920097	SPRING (4.2486)		2															
4.4160 - PLUG, OIL COOLER BYPASS VALVE																			
	5136227	PLUG (4.1710)		2															

## 4.4000A OIL COOLER AND MARINE GEAR LINES

PART ..FIG .. NUMBER .. NAME AND DESCRIPTION ..			TYPES															
			8 6 8	9 8 3	1 0 0 4	1 0 7 9	1 0 8 1	1 0 8 3	1 0 9 3	1 0 9 9	1 1 0 0							
		4.4170 - GASKET, OIL COOLER BYPASS VALVE PLUG																
	5177773	GASKET .....		2														
		4.4190 - TUBE, OIL COOLER INLET AND OUTLET OIL																
	8924445	CONNECTOR, 3/4" TUBE INLET (12.9415) .....			1													
	9402711	CONNECTOR, 3/4" TUBE OUTLET (12.9415) .....		1														
		4.4213 - HOSE, OIL COOLER WATER INLET																
3A	8924805	HOSE, 1" I.D.X4.76" L. ....			1					1								
	8927948	HOSE, 1" I.D.X5.94" L. ....									1							
3A	5118149	+ HOSE, 1" I.D.X6.75" L. ....	1															
	8927229	HOSE, 1" I.D.X6.75" L. SILICONE					1											
3A	5118149	+ HOSE, 1" I.D.X30" L. (CUT L. 8.50") (4.1642) .....					1		1									
	8927741	HOSE, 1" I.D.X8.50" L. SILICONE							1	1								
3A	8924187	ELBOW, 3/4" X 1" (5.2161) .....	1				1											
3A	8925037	ELBOW, 3/4" PIPE .....	1				1	1	1	1	1							
	8924804	CONNECTOR, 3/4" PIPE .....			1						1							
		+ STD. LENGTH HOSE; CUT TO LENGTH SHOWN.																
		4.4214 - CLAMP, OIL COOLER WATER INLET HOSE																
3A	5104358	CLAMP, 1" HOSE (12.9660) .....	2		2	2	2	2	2	2	2							
		4.4220 - ELBOW, OIL COOLER WATER OUTLET																
	8927673	ELBOW, 90 DEG. ....				1		1	1									
		4.4240 - HOSE, OIL COOLER WATER OUTLET																
	5128120	+ HOSE, 3/4" I.D.X28" L. (CUT L. 2.26") (4.8001) .....					2		2	2								
3A	5169721	+ HOSE, 7/8" I.D. (CUT L. 2.50") (4.8010) .....	2															
	8927227	HOSE, 7/8" I.D.X2 1/2" SILICONE					2											
3A	5118149	+ HOSE, 1" I.D.X8 1/2" (4.1642) .....			1						1							
	8927950	HOSE, 1" I.D.X9" L. ....										1						
3A	8927357	SHIELD, HEAT .....				1		1	1									
	8924187	ELBOW, 3/4"X1" (5.2161) .....	1				1											
	8925037	ELBOW, 3/4" PIPE (4.4213) .....			2													
	8924198	CONNECTOR, 3/4" PIPE (5.1235) .....			1						1							
		+ STD. LENGTH HOSE; CUT TO LENGTH SHOWN.																
		4.4250 - CLAMP, OIL COOLER WATER OUTLET HOSE																
3A	8926693	CLAMP, 3/4" HOSE (12.9660) .....				4		4	4									
	5104358	CLAMP, 1" HOSE (12.9660) .....	4		2		4			2	2							

## 4.4000A OIL COOLER AND MARINE GEAR LINES

PART		TYPES									
FIG	NUMBER	NAME AND DESCRIPTION	8 6 8	9 8 3	1 0 4	1 0 7 9	1 0 8 1	1 0 8 3	1 0 9 3	1 0 9 9	1 1 0 0
<b>4.4270 - TUBE, OIL COOLER WATER OUTLET</b>											
	<b>8926475</b>	TUBE, DEV. L. 229.0 MM			1			1	1		
3A	<b>8921871</b>	TUBE, DEV. L. 432.0 MM	1				1				
3A	<b>8923414</b>	CONNECTOR, 130 MM L.	1								
<b>4.4290 - CLAMP, OIL COOLER WATER OUTLET TUBE HOSE</b>											
3A	<b>8922198</b>	CLIP	1				1				
	<b>8927358</b>	CLIP				1		1			
	<b>8926476</b>	CLIP							1		
3A	<b>120393</b>	WASHER, 5/16" (12.9190)	1			1	1	1	1		

## 8.2 ENGINES

## . TYPES

[illegible]

4B	<b>5108474</b>	CAP .....
	<b>8926676</b>	CAP ASSY. (CLOSED BREATHER SYSTEM) .....
	<b>8926833</b>	CAP ASSY. (OPEN BREATHER SYSTEM) .....

## 4.6000A DIPSTICK

PART			TYPES											
..FIG	NUMBER	NAME AND DESCRIPTION	9 4 6	9 4 7	1 1 4 0	1 1 4 8								
<b>4.6001 - DIPSTICK</b>														
4A,B	<b>8920461</b>	DIPSTICK (X-505.0 MM., Y-16.0 MM., Z-461.0 MM.)	1											
4A,B	<b>8920462</b>	DIPSTICK (X-478.0 MM., Y-14.5 MM., Z-443.5 MM.)		1										
4A,B	<b>8926295</b>	DIPSTICK (X-556.0 MM., Y-33.0 MM., Z-509.0 MM)			1									
4A,B	<b>8927676</b>	DIPSTICK (X-493.7 MM., Y-17.5 MM., Z-473.0 MM)				1								
	<b>9421744</b>	PLUG, CUP 7/16" (12.9320)	1	1	1	1								
<b>4.6030 - ADAPTOR, DIPSTICK</b>														
4A,B	<b>8926692</b>	ADAPTOR (90 MM. DEV. L)	1	1	1	1								

## 4.7000A OIL PAN

PART		TYPES																		
FIG	NUMBER	NAME AND DESCRIPTION	6 7 9	7 1 8	7 2 4	7 4 2	7 4 3	7 6 0												
4.7001 - PAN, OIL																				
5A	8920842	* PAN	1																	
	8926981	PAN		1																
	8924674	PAN			1															
	8925571	PAN				1														
	8926080	PAN					1													
	8925293	PAN						1												
5A	8921551	RETAINER	2																	
	8922784	REINFORCEMENT (LEFT SIDE)		1	1															
	8922785	REINFORCEMENT (RIGHT SIDE)		1	1															
5A	11504295	BOLT, M8 X 1.25 X 20.0 MM (W/SPR. WASHER) (12.9001)	19																	
	11504471	BOLT, M8X1.25X25.0 MM (12.9001)				17	17													
5A	8923023	BOLT, M8 X 1.25 X 30.4 MM (12.9001)		13	13															
	11504466	BOLT, M8X1.25X35.0 MM (12.9001)				2														
	11505269	BOLT, M8X1.25X55.0 MM (12.9001)					2													
	* NOT SERVICED, USE 8926981 OIL PAN AND 8928816 CONVERSION KIT.																			
4.7022 - ADAPTOR, OIL PAN REAR SEAL																				
	8922787	ADAPTOR, REAR SEAL		1	1			1												
	8920091	GASKET (1.5010)		1	1	1	1	1												
5A	8922783	BOLT, M8X1.25X20.0 MM (12.9001)		6	6			6												
4.7030 - GASKET, OIL PAN TO BLOCK																				
5A	5149728	GASKET SET	1																	
	8920089	GASKET, OIL PAN R.H.				1	1													
	8920090	GASKET, OIL PAN L.H.				1	1													
	8922786	SEAL, ISOLATOR		1	1			1												
	8925360	* ADAPTOR, OIL PAN SEAL	1																	
	* FOR USE WITH ISOLATED OIL PAN 8922782 AND OLD STYLE FRONT COVER 8922074.																			
4.7080 - PLUG, OIL PAN DRAIN																				
5A	3866776	PLUG ASSY., 1/2"-20 (MAGNETIC)	1	1	1	1		1												
	5103186	PLUG, 1/2"-14 PIPE (12.9550)						1												
	5103187	PLUG, 3/4"-14 PIPE (12.9550)						2												
4.7090 - GASKET, OIL PAN DRAIN PLUG																				
5A	8922349	WASHER, COPPER	1	1	1	1		1												

## 4.8000A VENTILATING SYSTEM

PART			TYPES														
FIG	NUMBER	NAME AND DESCRIPTION	7 7 8	8 0 7	8 0 8	8 1 9	8 2 6	8 4 6	8 4 7	8 4 8	8 5 1						
4.8001 - PIPE ASSY., BREATHER																	
6A	8920719	HOSE, 25.4 MM I.D.	1	1	1		1										
6A	8923213	HOSE, 24.4 MM I.D.															
6A	5118149	HOSE, 1" I.D. X 2.50" CUT L. (4.1642)				1											
6A	5186840	CLAMP (13/16"-1 1/2" DIA.) (12.9660)	2	2	2	2											
4.8002 - SEAL, BREATHER PIPE																	
	8920413	+ SEAL (UPPER)	1														
		+ OBSOLETE.															
4.8003 - REGULATOR, BREATHER PIPE																	
	8996964	* REGULATOR	1														
6A	11500714	BOLT, M8 X 1.25 X 20.0 MM (12.9001)	2														
		* NOT SERVICED, USE 8922983.															
4.8010 - EXTENSION, BREATHER TUBE																	
6A	8922796	TUBE, 40" L. FLEX	1	1	1												
6A	8924370	TUBE, 12" L. FLEX					1										
6A	8923212	TUBE, 30.77" DEV. L.						1									
	8926682	TUBE, DEV. L. 341.6 MM (R. BANK)							1		1	1					
	8926683	TUBE, DEV. L. 331.2 MM (L. BANK)							1		1	1					
	8926684	TUBE, DEV. L. 1099.0 MM (OUTLET)							1								
	8927922	TUBE, DEV. L. 655.5 MM (OUTLET)								1							
	8927923	TUBE, DEV. L. 576.1 MM (OUTLET)									1						
	8924749	* PLUG, 1/8" PIPE (12.9550)						2									
	8926680	TEE						1			1	1					
		* INSTALLED IN CENTER OF EACH CYLINDER HEAD FOR TURBO APPLICATIONS EXCLUDING MARINE ENGINES.															
4.8013 - ELBOW, BREATHER																	
	8926679	ELBOW						2		2	2						
	8926678	ELBOW							2								
	8926677	CONNECTOR (TO ROCKER COVER)							2								
4.8040 - CLIP, BREATHER TUBE																	
	5151189	CLIP, 3/4"									2	2					
6A	2419766	CLIP, 1" (NEOPRENE)	3	1	2												
6A	5169476	CLIP, 1" (5.2190)				1											
6A	8923214	CLIP, 1"					1	1									
	5157702	CLIP, 1"					1	1									
	8926681	CLIP															
	5144977	CLIP, 1" (4.8183)									1	1					
	5173022	BRACKET (5.5379)									1						
6A	8922228	BOLT, M10X1.5X25.0 MM (12.9001)	1	1	1												
	11500877	BOLT, M10X1.5X20.0 MM (12.9001)					2	2									
	11500714	BOLT, M8X1.25X20.0 MM (12.9001)						2			1						
	11504505	BOLT, M8X1.25X20.0 MM (12.9001)				1						1					
	120393	WASHER, 5/16" (12.9190)			1												
	106261	WASHER, 5/16" (12.9190)															
	103341	WASHER, 3/8" (12.9190)					1	1									
	11502811	NUT, M8X1.25 (2.5220)				1											
	11501066	NUT, M8X1.25" (12.9120)									1						
	5101020	STRAP, NYLON TIE (2.5255)	2														



## 4.8000A VENTILATING SYSTEM

PART		TYPES									
FIG	NUMBER	NAME AND DESCRIPTION	7 8	8 0 7	8 0 8	8 1 9	8 2 6	8 4 6	8 4 7	8 4 8	8 5 1
		<b>4.8046 - INSTALLTION KIT, BREATHER</b>									
	<b>8922983</b>	KIT, BREATHER SYSTEM REWORK	1	1	1						
		<b>4.8055 - SHELL, BREATHER</b>									
6A	<b>8920731</b>	SHELL	1	1	1	1	1				
6A	<b>8921279</b>	BOLT, 5/16"-18 X 5"	1	1	1	1	1				
6A	<b>8920720</b>	WASHER, .301" X .601" SPL	1	1	1	1	1				
		<b>4.8059 - SEAL, BREATHER SHELL</b>									
6A	<b>8921294</b>	SEAL RING	1	1	1	1	1				
		<b>4.8060 - FILTER UNIT, BREATHER</b>									
6A	<b>8920712</b>	ELEMENT	1	1	1	1	1				
		<b>4.8183 - BRACKET, BREATHER EXTENSION PIPE</b>									
	<b>5176400</b>	BRACKET (4.8010)				1					
	<b>11504505</b>	BOLT, M8X1.25X20.0 MM (12.9001)				1					

## GROUP NOMENCLATURE

1.0000	ENGINE (less major assemblies)	5.0000	COOLING SYSTEM (CONT'D)
1.1000	Cylinder Block	5.4000B	Fan Shroud
1.1000A	Air Box Drains	5.5000A	Heat Exchanger or Keel Cooling
1.2000	Cylinder Head	5.6000A	Raw Water Pump
1.2000A	Engine Lifter Bracket	5.7000A	Water Filter
1.3000	Crankshaft, Oil Seals and Stabilizers		
1.3000A	Crankshaft Front Cover	6.0000	EXHAUST SYSTEM
1.3000B	Vibration Damper	6.1000A	Exhaust Manifold and/or Connections
1.3000C	Crankshaft Pulley	6.2000A	Exhaust Muffler and/or Connections
1.3000D	Crankshaft Pulley Belt		
1.4000A	Flywheel	7.0000	ELECTRICAL--INSTRUMENTS
1.5000A	Flywheel Housing	7.1000A	Battery Charging Generator
1.5000B	Flywheel Housing Adaptor	7.2000A	Battery Cables
1.6000	Connecting Rod and Piston	7.2000B	Automatic Starting
1.7000	Camshaft and Gear Train	7.2000B	Automatic Starting (Twin and Quad)
1.7000A	Balance Weight Cover	7.3000A	Starting Motor
1.7000B	Accessory Drive	7.4000A	Instruments
1.8000	Valve and Injector Operating Mechanism	7.4000A	Instruments (Twin and Quad)
1.8000A	Rocker Cover	7.4000B	Tachometer Drive
		7.4000B	Tachometer Drive (Twin and Quad)
		7.4000C	Shutoff, Alarm and O.S. Governor
		7.4000C	Shutoff, Alarm and O.S. Governor (Twin and Quad)
2.0000	FUEL SYSTEM	7.5000A	Power Generator
2.1000A	Fuel Injector	7.6000A	Control Cabinet
2.2000	Fuel Pump	7.6000A	Control Cabinet (Twin and Quad)
2.2000A	Fuel Pump Drain	7.7000A	Wiring Harness
2.3000A	Fuel Filter and Strainer	7.8000A	Air Heater
2.3000A	Fuel Filter and Strainer (Twin and Quad)	7.8000A	Air Heater (Twin and Quad)
2.4000	Fuel Manifold and/or Connections	7.10000A	Hydraulic Governor Solenoid
2.4000A	Dual Fuel System		
2.5000A	Fuel Lines and Fuel Cooler	8.0000	POWER TAKE-OFF
2.5000A	Fuel Lines and Fuel Cooler (Twin and Quad)	8.1000A	Power Take-off and/or Clutch
2.6000A	Fuel Tank	8.1000A	Power Take-off and/or Clutch (Twin and Quad)
2.6000B	Electric Governor	8.3000A	Torque Converter
2.7000A	Mechanical Governor	8.3000A	Torque Converter (Twin and Quad)
2.8000A	Hydraulic Governor	8.3000B	Transmission Lines
2.9000	Injector Controls		
2.9000	Injector Controls (Twin and Quad)	9.0000	TRANSMISSION AND PROPULSION
2.9000A	Throttle Controls	9.1000A	Hydraulic Marine Gear
2.9000A	Throttle Controls (Twin and Quad)	9.1000A	Hydraulic Marine Gear (Twin and Quad)
		9.2000A	Reverse and Reduction Gear (mechanical)
3.0000	AIR SYSTEM	9.3000A	Power Transfer Gear
3.1000A	Air Cleaner and/or Adaptor	9.3000A	Power Transfer Gear (Twin and Quad)
3.2000A	Air Silencer	9.4000	Transmission--Highway
3.3000A	Air Inlet Housing	9.7000	Transmission--Off-highway
3.4000	Blower and Drive	9.9000	Transmission--Rail Car
3.4000A	Blower Drive Shaft		
3.4000B	Blower End Plate Cover	10.0000	SHEET METAL
3.5000A	Turbocharger, Intercooler, and Aftercooler	10.1000A	Engine Hood
4.0000	LUBRICATING SYSTEM	11.0000	ENGINE MOUNTING
4.1000A	Oil Pump	11.1000A	Engine Mounting and Base
4.1000B	Oil Distribution System	11.1000A	Engine Mounting and Base (Twin and Quad)
4.1000C	Oil Pressure Regulator		
4.2000A	Oil Filter	12.0000	MISCELLANEOUS
4.3000A	Oil Filter Lines	12.2000A	Bilge Pump
4.4000A	Oil Cooler and Marine Gear Lines	12.3000A	Vacuum Pump
4.5000A	Oil Filler	12.4000A	Air Compressor
4.6000A	Dipstick	12.5000A	Hydraulic Pump
4.7000A	Oil Pan	12.6000A	Gasoline Starter
4.8000A	Ventilating System	12.6000B	Air Starter
		12.6000C	Cold Weather Starting Aid
5.0000	COOLING SYSTEM	12.6000D	Hydraulic Starter
5.1000	Fresh Water Pump	12.6000E	Hydraulic Starter Accessories
5.1000A	Fresh Water Pump Cover	12.8000A	Supplies
5.2000A	Water Outlet Manifold and/or Elbow	12.8000B	Fabrication Material
5.2000B	Thermostat	12.8000C	Miscellaneous Service Kits and Sets
5.2000C	Water Bypass Tube	12.8000D	Miscellaneous Service Parts
5.3000A	Radiator		
5.3000B	Water Connections		
5.4000A	Fan		

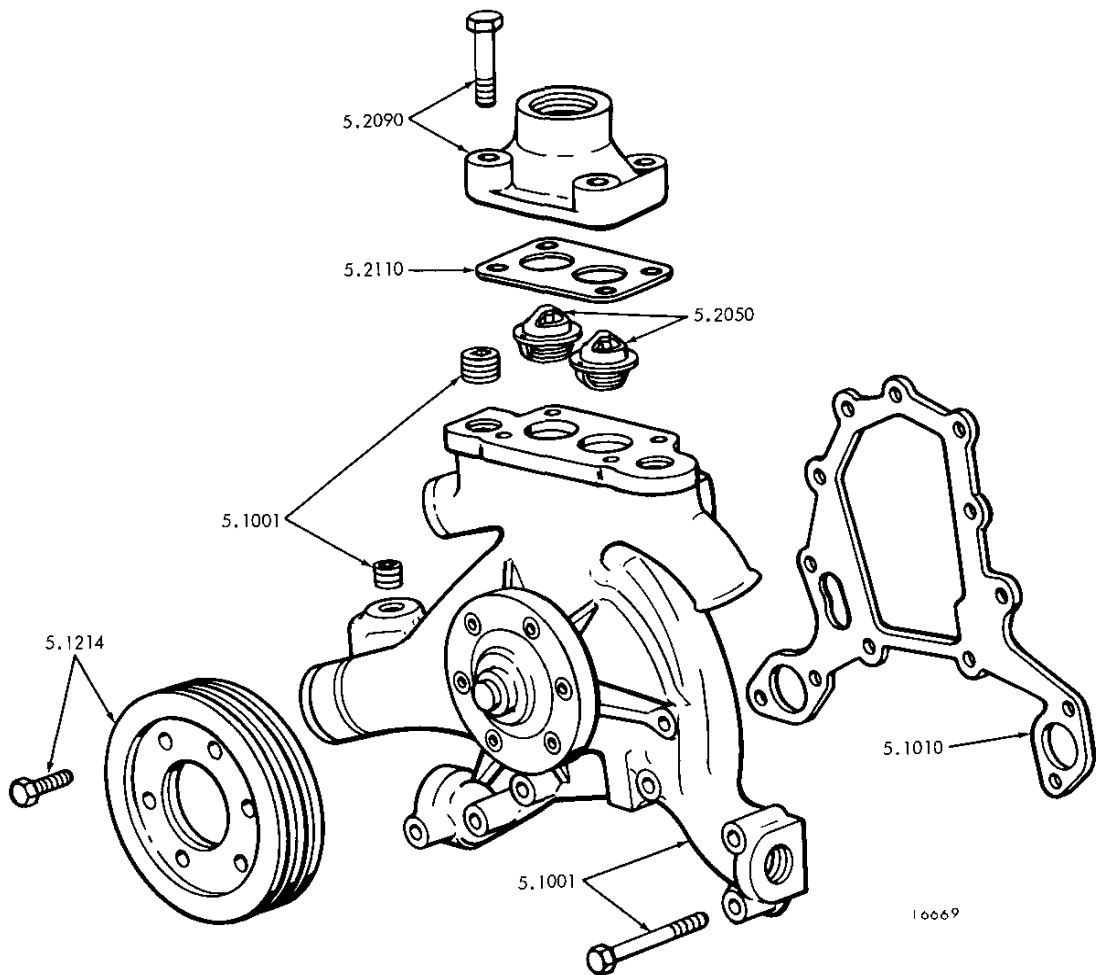


FIG. 1A FRESH WATER PUMP ASSEMBLY, PULLEY AND THERMOSTATS

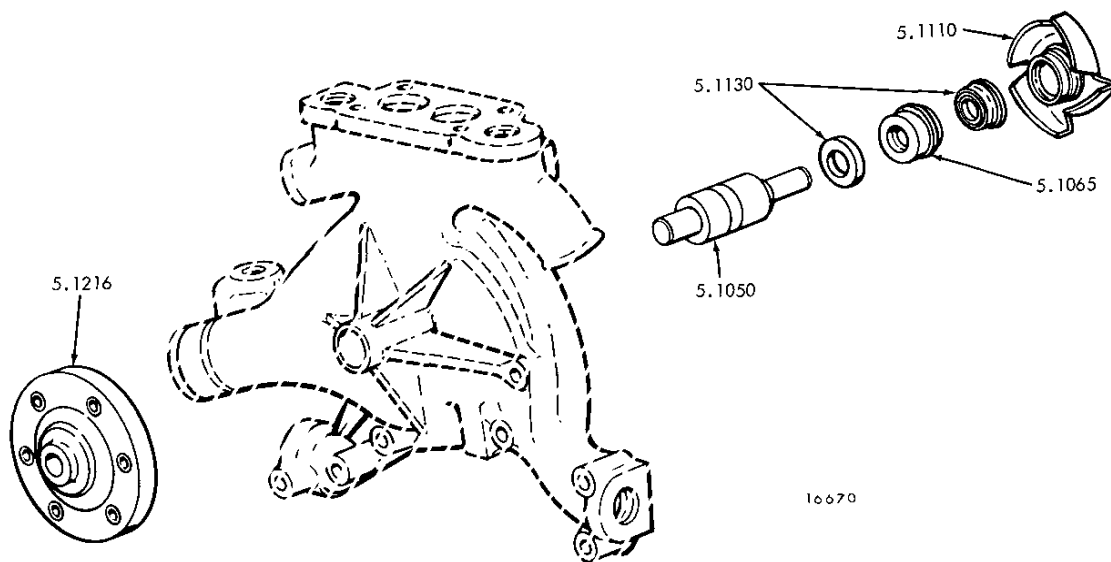


FIG. 2A FRESH WATER PUMP

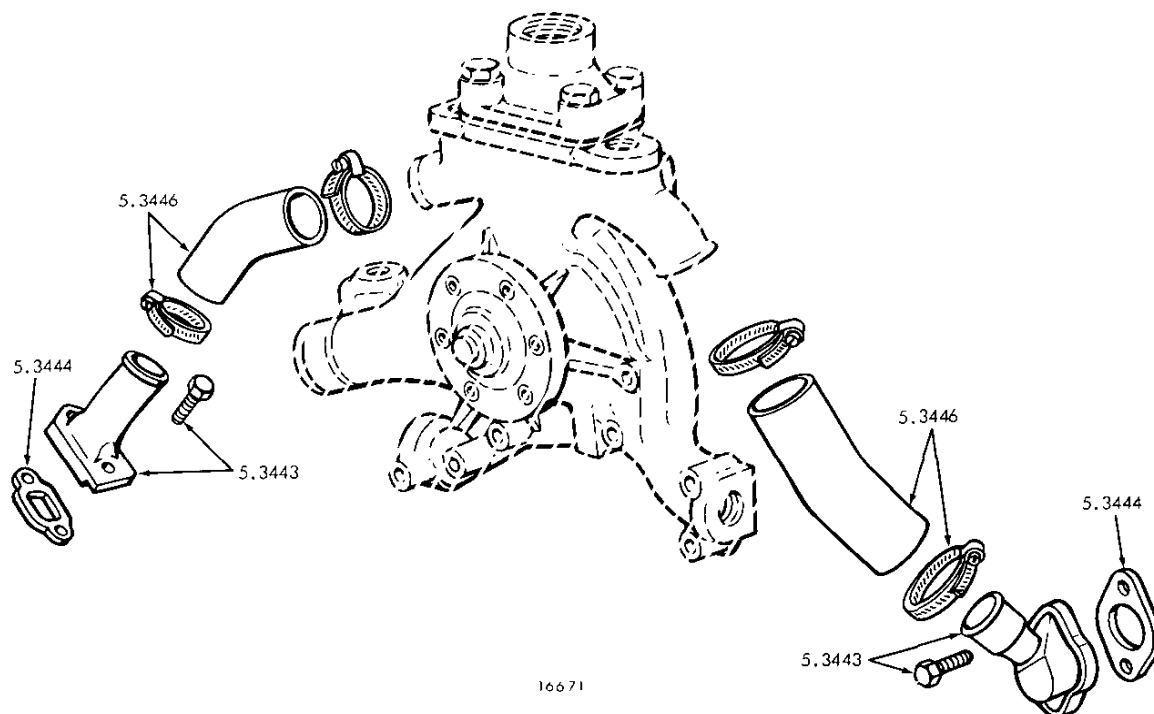


FIG. 3A WATER CONNECTIONS

Figs. 2A & 3A of 5.0000

Oct., 1979

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## 5.1000 FRESH WATER PUMP

PART			TYPES											
..FIG	NUMBER	NAME AND DESCRIPTION	2 1 0	2 1 2	2 2 9	2 3 0	2 3 3	2 3 4	2 3 5	2 3 6	2 3 7	2 4 0	2 4 6	2 4 7
<b>5.1001 - PUMP ASSY., FRESH WATER</b>														
SEE ASSEMBLY BREAKDOWN PAGE A1.														
1A	<b>5149729</b>	* PUMP ASSY. ....	1	1										
1A	<b>8922302</b>	PUMP ASSY. ....	1	1	1	1	1	1	1	1				
	<b>8920151</b>	* PUMP ASSY. ....			1	1								
	<b>8923149</b>	+ PUMP ASSY. ....									1			
1A	<b>8924599</b>	PUMP ASSY. ....										1		
1A	<b>8927158</b>	PUMP ASSY. ....											1	1
	<b>8924140</b>	DRAINCOCK, 1/4" (12.9510) .....									1			
	<b>5115214</b>	PLUG, 1/2" PIPE SQ. SOC. (12.9550) .....						1		1			1	1
	<b>5103187</b>	PLUG, 3/4"-14 PIPE (12.9550) .....				1	1						1	
	<b>8923313</b>	PLUG, 3/4"-14 PIPE (12.9550) .....									2			
	<b>11500714</b>	BOLT, M8 X 1.25 X 20.0 MM (12.9001) .....	5	5	5	5	5	5	5	5			5	5
	<b>8922228</b>	BOLT, M10X1.50X25 MM (12.9001) .....									2	2		
1A	<b>8922229</b>	BOLT, M10X1.50X50.0 MM (12.9001) .....	3	3	3	3	3	3	3	3			3	3
1A	<b>8922230</b>	BOLT, M10X1.50X70.0 MM (12.9001) .....	5	5	5	5	5	5	5	5	4	4	5	5
1A	<b>8926242</b>	BOLT, M10X1.50X100.0 MM (12.9001) .....										2		
* NOT SERVICED, USE 8922302.														
+ NOT SERVICED, USE 8924831.														
<b>5.1002 - RECONDITIONING KIT, FRESH WATER PUMP</b>														
A RECONDITIONING KIT INCLUDES SHAFT AND BEARING ASSY. IN 5.1050, SEAL ASSY. IN 5.1065, IMPELLER IN 5.1110, SEAT AND SEAL IN 5.1130 AND HUB IN 5.1216.														
	<b>8924376</b>	KIT, RECONDITIONING (8V) .....	AR	AR	AR	AR	AR	AR	AR	AR		AR	AR	AR
	<b>8924784</b>	KIT, RECONDITIONING (8V MARINE) .....									AR			
<b>5.1010 - GASKET, FRESH WATER PUMP</b>														
1A	<b>8922132</b>	GASKET (W/P TO COVER) .....	1	1	1	1	1	1	1	1			1	1
	<b>8923207</b>	GASKET (W/P TO COVER) .....									2	2		
<b>5.1214 - PULLEY, FRESH WATER PUMP</b>														
1A	<b>8920115</b>	PULLEY, 3 GROOVES, .500" WIDE .....	1		1				1	1		1	1	1

## 5.1000 FRESH WATER PUMP

			TYPES										
FIG	PART NUMBER	NAME AND DESCRIPTION	248	249	250	254	255	256	257	258	259	260	261
5.1001 - PUMP ASSY., FRESH WATER													
SEE ASSEMBLY BREAKDOWN PAGE A1.													
1A	8927158	PUMP ASSY.	1	1	1								
	8927515	PUMP ASSY., MARINE				1							
1A	8927680	PUMP ASSY.					1						
	8927728	PUMP ASSY., MARINE						1					
1A	8927729	PUMP ASSY.							1				
1A	8928672	PUMP ASSY.								1	1	1	
1A	8928688	PUMP ASSY.											1
	5115214	PLUG, 1/2" PIPE SQ. SOC. (12.9550)											
	5103187	PLUG, 3/4"-14 PIPE (12.9550)		1	1					1		1	
	5142549	PLUG, 3/4" PIPE SQ. SOC. (12.9550)				2		2					
	8924140	DRAINCOCK, 1/4" (12.9510)				1		1					
	11500714	BOLT, M8X1.25X20.0 MM (12.9001)	5	5	5					5	5	5	
1A	8922229	BOLT, M10X1.50X50.0 MM (12.9001)	3	3	3					3	3	3	
1A	8922230	BOLT, M10X1.50X70.0 MM (12.9001)	5	5	5	4	4	4	4	5	5	5	4
	11500887	BOLT, M10X1.50X100.0 MM					2		2				2
5.1002 - RECONDITIONING KIT, FRESH WATER PUMP													
A RECONDITIONING KIT INCLUDES SHAFT AND BEARING ASSY. IN 5.1050, SEAL ASSY. IN 5.1065, IMPELLER IN 5.1110, SEAT AND SEAL IN 5.1130 AND HUB IN 5.1216.													
	8924376	KIT, RECONDITIONING (8V)	AR	AR	AR		AR						
	8924784	KIT, RECONDITIONING (8V MARINE)				AR							
	8928670	KIT, RECONDITIONING (8V; UNITIZED SEAL)							AR	AR	AR	AR	AR
	8928671	KIT, RECONDITIONING (8V MARINE; UNITIZED SEAL)						AR					
5.1010 - GASKET, FRESH WATER PUMP													
1A	8922132	GASKET (W/P TO COVER)	1	1	1					1	1	1	
	8923207	GASKET (W/P TO COVER)				2	2	2	2				2
5.1214 - PULLEY, FRESH WATER PUMP													
1A	8920115	PULLEY, 3 GROOVES, .500" WIDE		1			1		1	1		1	1
1A	11500714	BOLT, M8X1.25X20.0 MM (12.9001)		6			6		6	6		6	6

## 5.1000 FRESH WATER PUMP

PART  
FIG . . . NUMBER . . . . . NAME AND DESCRIPTION . . . . .

COLUMN

5.1001 - PUMP ASSY., FRESH WATER			A	B	C	D	E	F	G	H	I	J	K	L	M
1A	5149729	* PUMP ASSY. . . . .	1												
1A	8922302	PUMP ASSY. . . . .		1											
1A	8920151	* PUMP ASSY. . . . .			1										
	8923149	* PUMP ASSY., MARINE . . . . .				1									
	8924831	PUMP ASSY., MARINE . . . . .					1								
1A	8924599	PUMP ASSY. . . . .						1							
1A	8927158	PUMP ASSY. . . . .							1						
	8927515	@ PUMP ASSY., MARINE . . . . .								1					
	8927680	@ PUMP ASSY. . . . .									1				
	8927728	@ PUMP ASSY., MARINE . . . . .										1			
	8927729	@ PUMP ASSY. . . . .											1		
	8928672	PUMP ASSY. . . . .												1	
	8928688	@ PUMP ASSY. . . . .													1
	8924380	PLUG, 1/8" PIPE W/SEAL (12.9550) . . . . .						1							
	444619	PLUG, 1/4" PIPE (2.4015) . . . . .	1		1										
	8922327	+ PLUG, 1/4" PIPE (12.9550) . . . . .		1	1										
	8923847	PLUG, 1/4" PIPE SQ. SOC. (4.7001) . . . . .								1	1	1			
1A	8924517	PLUG, 3/8" PIPE W/SEALANT (12.9550) . . . . .		1					1					1	
1A	5103186	PLUG, 1/2" PIPE (12.9550) . . . . .	4	4	4			1	4		1		1	4	1
	5115214	PLUG, 1/2" PIPE (12.9550) . . . . .				2	2	2							
	8923916	PLUG, 1/2" PIPE SQ. SOC. (12.9550) . . . . .							2	2	2	2	2		2
1A	5103187	PLUG, 3/4" PIPE (12.9550) . . . . .	4	4	3			1	4		1		1	4	1
	5142549	PLUG, 3/4" PIPE (12.9550) . . . . .				2	2	4							
	8923313	PLUG, 3/4" PIPE SQ. SOC. (12.9550) . . . . .								2	4	2	4		4
		* NOT SERVICED. SHOWN FOR REFERENCE ONLY.													
		+ EARLY UNITS.													
		@ REFER TO THERMOSTAT TYPE FOR COVER, THERMOSTAT, GASKET, BOLTS AND PLUGS.													
5.1031 - COVER, FRESH WATER PUMP BODY															
	8923151	COVER . . . . .				1	1	1		1	1	1	1		1
	8923144	RING, RETAINING (12.9645) . . . . .				1	1	1		1	1	1	1		1
5.1032 - GASKET, FRESH WATER PUMP BODY COVER															
	8923152	SEAL . . . . .				1	1	1		1	1	1	1		1
5.1050 - SHAFT ASSY., FRESH WATER PUMP															
2A	8920144	SHAFT AND BEARING ASSY. . . . .	1	1	1	1	1	1	1	1	1	1	1	1	1
5.1065 - SEAL, FRESH WATER PUMP SHAFT BEARING															
2A	9799107	SEAL . . . . .	1	1	1	1	1	1	1	1					
	8927408	SEAL ASSY. (CERAMIC) . . . . .										1	1	1	1
5.1110 - IMPELLER, FRESH WATER PUMP															
2A	8920104	IMPELLER . . . . .	1	1	1	1	1	1	1	1					
	8927727	IMPELLER . . . . .										1	1	1	1

## 5.1000 FRESH WATER PUMP

PART			COLUMN												
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M
5.1130 - SEAL, FRESH WATER PUMP															
2A	8920389	SEAL (FRONT)	1	1	1	1	1	1	1	1	1				
2A	487617	SEAT, SEAL	1	1	1	1	1	1	1	1	1				
5.1214 - PULLEY, FRESH WATER PUMP															
	8923153	PULLEY, 2 GROOVE .500" WIDE, 178.0 MM DIA.				1	1			1		1			
5.1216 - HUB, FRESH WATER PUMP DRIVEN PULLEY															
2A	8922299	HUB	1	1	1			1	1		1		1	1	1



[illegible]

1A	<b>3046745</b>	THERMOSTAT (180 F. DEG. OR 82 C. DEG. OPENING) .....
1A	<b>3051089</b>	THERMOSTAT (170 F. DEG. OR 77 C. DEG. OPENING) .....
1A	<b>3054224</b>	THERMOSTAT (180 F. DEG. OR 82 C. DEG. OPENING) .....
1A	<b>3058608</b>	THERMOSTAT (180 F. DEG. OR 82 C. DEG. OPENING; FULL BLOCKING) .....
1A	<b>3058607</b>	THERMOSTAT (170 F. OR 77C. DEG. OPENING; FULL BLOCKING) .....

1A	8920152	COVER
	8924824	COVER
	8924814	COVER
	8926314	HOUSING ASSY. (INCLUDES ITEMS MARKED +)
	8926316	+ SEAL RING, .796" I.D.X.240" THK.
	5128234	+ PIN, JIGGLE
	8924380	PLUG, 1/8"-27 PIPE (12.9550)
	5121182	PLUG, 1/4" PIPE HEX. SOC. (2.4015)
	8923847	PLUG, 1/4" PIPE SQ. SOC. (4.7001)
	8924517	+ PLUG, 3/8" PIPE SQ. SOC. (12.9550)
	5103186	+ PLUG, 1/2" PIPE HEX. SOC. (12.9550)
	5115214	* PLUG, 1/2" PIPE SQ. SOC. (12.9550)
	5142549	+ PLUG, 1/2" PIPE SQ. SOC. (12.9550)
	5142549	@ PLUG, 3/4" PIPE SQ. SOC. (12.9550)
1A	8922229	BOLT, M10X1.5X50.0 MM (12.9001)
1A	11500785	BOLT, M10X1.5X80.0 MM (12.9001)
1A	11500786	BOLT, M10X1.5X90.0 MM (12.9001)
	8926396	BOLT, M10X1.50X160 MM (12.9001)
	8926397	BOLT, M10X1.50X190 MM (12.9001)
	8926398	BOLT, M10X1.50X200 MM (12.9001)
		* TOP LEFT OF PUMP.
		@ TOP RIGHT OF PUMP.

## 1A 8924813 GASKET .....

## TYPES

[illegible]

## 5.3000B WATER CONNECTIONS

PART		TYPES																
..FIG ..	NUMBER	NAME AND DESCRIPTION	3 6 1	3 8 3	3 8 8	3 8 9	3 9 3	4 0 2	4 0 3	4 0 4								
	5.3269	- TUBE, TURBOCHARGER WATER RETURN																
8923494		TUBE, STBD. 25.4 MM DIA. X 833.0 MM DEV. L. ....			1													
8923501		TUBE, PORT 25.4 MM DIA. X 428.0 MM DEV. L. ....				1												
8923503		TUBE, 25.4 MM DIA. X 432.0 MM DEV. L. ....			1	1												
5118149		HOSE, BULK 1"X2 1/2" CUT L. (4.1642) ....			2	2												
8924673		ELBOW, 90 DEG. (12.9590) ....			1	1												
8924140		DRAINCOCK, 1/4" (12.9510) ....			1	1												
5186840		CLAMP, HOSE 1" (12.9660) ....			6	6												
5144149		CLIP, TUBE 1" (4.8040) ....			2	2												
11500724		= BOLT, M10 X 1.5 X 30.0 MM (12.9001) ....			2	2												
5173256		= SPACER, 15/32"X13/16"X5/16" (7.1598) ....			2	2												
11502811		+ NUT, M8X1.25 (2.5220) ....			2	2												
		= THRU 8G-42043																
		+ EFFECTIVE WITH 8G-42044.																
	5.3295	- HOSE, HEAT EXCHANGER FRESH WATER INLET																
8924386		HOSE, 90 DEG. BEND ....			1	1												
	5.3305	- CLAMP, HEAT EXCHANGER FRESH WATER INLET HOSE																
5102013		CLAMP, HOSE 2 1/2" (12.9660) ....			2	2												
	5.3334	- HOSE, HEAT EXCHANGER OUTLET CONNECTION TO WATER PUMP																
8923143		HOSE, 90 DEG. BEND ....			1	1												
5102013		CLAMP, HOSE 2 1/2" (12.9660) ....			2	2												
	5.3350	- CONNECTION, OIL COOLER WATER INLET																
5127041		CONNECTOR, 25 DEG. 3/4" NPT (5.1235) ....			2	2												
	5.3365	- HOSE, OIL COOLER WATER INLET CONNECTION																
5118149		HOSE, 1" I.D. X 30" L. (CUT L. 5.75") ....			1	1												
	5.3366	- CLAMP, OIL COOLER WATER INLET CONNECTION																
5186840		CLAMP, HOSE 1" (12.9660) ....			2	2												
	5.3422	- HOSE, OIL COOLER WATER OUTLET																
8923148		HOSE, 22.0 MM I.D. ....			1	1												
5144702		CONNECTOR, 3/4" PIPE (5.2165) ....			2	2												
5186840		CLAMP, HOSE 1" (12.9660) ....			2	2												

## 5.3000B WATER CONNECTIONS

PART		NAME AND DESCRIPTION		TYPES							
FIG	NUMBER			3 6 1	3 8 3	3 8 8	3 8 9	3 9 3	4 0 2	4 0 3	4 0 4
		<b>5.3430 - CONNECTOR, EXHAUST MANIFOLD FRESH WATER INLET</b>									
	<b>5144702</b>	CONNECTOR, 3/4" PIPE (5.2165)				4	4				
		<b>5.3432 - HOSE, EXHAUST MANIFOLD FRESH WATER INLET</b>									
	<b>5169721</b>	HOSE, 7/8" I.D. X 24" L. (CUT L. 1.74") (4.8010)				2	1				
	<b>8923147</b>	HOSE, 22.0 MM I.D.				1	1				
		<b>5.3433 - TUBE, EXHAUST MANIFOLD FRESH WATER INLET</b>									
	<b>8923142</b>	TUBE, 22.22 MM DIA. X 251.7 DEV. L.				1	1				
		<b>5.3434 - CLAMP, EXHAUST MANIFOLD FRESH WATER INLET HOSE</b>									
	<b>5186840</b>	CLAMP, HOSE 1" (12.9660)				6	4				
		<b>5.3443 - ELBOW, CYLINDER HEAD FRESH WATER OUTLET</b>									
3A	<b>8922570</b>	ELBOW (LB)		1	1				1	1	1
3A	<b>8920777</b>	* ELBOW (RB)		1	1						
3A	<b>8923414</b>	ELBOW (RB)		1	1				1		
	<b>8923072</b>	ELBOW (RB)				1	1	1			
	<b>8923141</b>	ELBOW (LB)				1	1				
	<b>8924812</b>	ELBOW (LB)						1			
	<b>8927699</b>	ELBOW (RB)							1	1	
3A	<b>11500718</b>	BOLT, M8X1.5X40.0 MM (12.9001)		2	2						
3A	<b>11500716</b>	+ BOLT, M8X1.25X25.0 MM (12.9001)		1	1					1	
	<b>11500717</b>	BOLT, M8X1.25X30.0 MM (12.9001)				4	4	4			
3A	<b>11500719</b>	BOLT, M8X1.25X45.0 MM (12.9001)		2	2				2	2	2
	<b>11500775</b>	BOLT, M8X1.25X50.0 MM (12.9001)							2	1	2
	<b>113175</b>	PLUG, PIPE 1/8" (12.9510)				1	1				
	<b>8924749</b>	PLUG, PIPE 1/8" (12.9550)				1	1				
	<b>5142549</b>	PLUG, PIPE 3/4" (12.9550)						1			
	<b>5103187</b>	PLUG, 3/4" PIPE (12.9550)			1						
		+ USE WITH 8923414 ELBOW.									
		* NOT SERVICED. USE 8923414 ELBOW AND (1) 11500716 BOLT.									
		<b>5.3444 - GASKET, ELBOW FRESH WATER OUTLET</b>									
3A	<b>8920161</b>	GASKET (LB) (RB)		1	1	2	2	2	1	1	1
3A	<b>8920083</b>	GASKET (RB)		1	1				1	1	1
		<b>5.3446 - HOSE, FRESH WATER OUTLET</b>									
3A	<b>8922569</b>	HOSE (ELBOW TO HSG.) (LB)		1	1				1		
	<b>8927228</b>	HOSE (ELBOW TO HSG., SILICONE) (LB)								1	1
3A	<b>8921097</b>	HOSE (35 MM I.D.) (RB)		1	1				1		
	<b>8927226</b>	HOSE (35 MM I.D., SILICONE) (RB)								1	1
	<b>5199776</b>	HOSE, 1 3/4" I.D. X 24" L. (CUT L. 3.26") (5.3295)				2	2	2			
3A	<b>5104958</b>	CLAMP, 1 1/2" SHOE HOSE (12.9660)		4	4				4	4	4

## 5.3000B WATER CONNECTIONS

PART			TYPES																
..FIG ..	NUMBER .....	NAME AND DESCRIPTION .....	3 6 1	3 8 3	3 8 8	3 8 9	3 9 3	4 0 2	4 0 3	4 0 4									
	5.3446	HOSE, FRESH WATER OUTLET (CONT'D)																	
	8920537	CLAMP, 1 9/16"-2 1/2" CLAMPING RANGE (12.9660) .....			4	4	4												

## TYPES

[illegible]

## 5.5000A HEAT EXCHANGER OR KEEL COOLING

PART		TYPES									
..FIG	NUMBER	NAME AND DESCRIPTION	4	9							
			5								
		<b>5.5001 - TANK, EXPANSION</b>									
	<b>8923146</b>	TANK .....	1								
	<b>8925832</b>	PLUG, 3/8" ZINC .....	1								
	<b>11500731</b>	BOLT, M12X1.75X30.0 MM (12.9001) .....	2								
		<b>5.5030 - COVER, HEAT EXCHANGER</b>									
	<b>8925835</b>	COVER .....	1								
	<b>8925833</b>	WASHER, FIBER .....	1								
		<b>5.5050 - GASKET, HEAT EXCHANGER COVER</b>									
	<b>8925834</b>	GASKET .....	1								
		<b>5.5070 - BRACKET, HEAT EXCHANGER MOUNTING</b>									
	<b>8923136</b>	BRACKET, L.H. ....	1								
	<b>8923137</b>	BRACKET, R.H. ....	1								
	<b>11500724</b>	BOLT, M10X1.50X30.0 MM (12.9001) .....	2								
	<b>11500730</b>	BOLT, M10X1.50X110.0 MM (12.9001) .....	2								
	<b>11500192</b>	LOCKWASHER, M10 (12.9200) .....	4								
		<b>5.5140 - CAP, EXPANSION TANK</b>									
	<b>6410640</b>	CAP, 15 LB. PRESSURE .....	1								
		<b>5.5335 - TUBE, HEAT EXCHANGER DEARATION</b>									
	<b>8924369</b>	TUBE, 6.35 MM I.D.X136.0 DEV. L. ....	1								
	<b>442321</b>	CONNECTOR, 1/4" TUBE, 1/8" NPTF (12.9460) .....	1								
	<b>8925032</b>	ELBOW, 90 DEG., 1/4" TUBE 1/8" NPTF (12.9480) .....	1								
		<b>5.5470 - HOSE, HEAT EXCHANGER RAW WATER INLET TUBE</b>									
	<b>8924714</b>	HOSE, 32.0 MM X307.0 MM L. ....	1								
	<b>5130652</b>	ELBOW, 1" 45 DEG. (3.5505) .....	1								
		<b>5.5480 - CLAMP, HEAT EXCHANGER RAW WATER INLET TUBE HOSE</b>									
	<b>5104958</b>	CLAMP, 1 1/4" HOSE (12.9660) .....	2								

## TYPES

5133515 BELT, .500" W.X37.0" L. (PREMIUM)  
(7.1575) .....

TYPES	
99	
1222	
1	
1	
112	
1	

## 5.6000A RAW WATER PUMP

PART		COLUMN											
..FIG	NUMBER	NAME AND DESCRIPTION	A										
		<b>5.6001 - PUMP ASSY., RAW WATER</b>											
	<b>8924483</b>	PUMP ASSY. (INCLUDES PULLEY) .....	1										
		<b>5.6030 - BODY, RAW WATER PUMP</b>											
	<b>8927521</b>	BODY .....	1										
	<b>5195753</b>	WEARPLATE (5.6020) .....	1										
		<b>5.6035 - CAM, RAW WATER PUMP BODY OFFSET</b>											
	<b>8927519</b>	CAM (BRASS) .....	1										
	<b>8927520</b>	SCREW .....	1										
		<b>5.6090 - COVER, RAW WATER PUMP</b>											
	<b>8927516</b>	COVER .....	1										
	<b>8927518</b>	SCREW .....	6										
		<b>5.6100 - GASKET, RAW WATER PUMP COVER</b>											
	<b>8927517</b>	GASKET .....	1										
		<b>5.6120 - SHAFT, RAW WATER PUMP</b>											
	<b>5199151</b>	SHAFT .....	1										
		<b>5.6130 - BEARING, RAW WATER PUMP</b>											
	<b>8927522</b>	BEARING .....	1										
		<b>5.6140 - RING, RAW WATER PUMP BEARING RETAINER</b>											
	<b>8927523</b>	RING, RETAINING (BEARING TO BODY) .....	1										
	<b>8927524</b>	RING, RETAINING (BEARING TO SHAFT) .....	1										
		<b>5.6160 - SEAL, RAW WATER PUMP BEARING</b>											
	<b>5195019</b>	SEAL (INNER) .....	1										
	<b>8927525</b>	SEAL (OUTER) .....	1										
		<b>5.6170 - SEAL, RAW WATER PUMP SHAFT</b>											
	<b>8927526</b>	SEAL .....	1										
		<b>5.6230 - IMPELLER, RAW WATER PUMP</b>											
	<b>5193602</b>	IMPELLER .....	1										
		<b>5.6400 - PULLEY, RAW WATER PUMP DRIVE</b>											
	<b>8923807</b>	PULLEY, SINGLE GROOVE .....	1										
	<b>8927527</b>	KEY .....	1										



## GROUP NOMENCLATURE

1.0000	ENGINE (less major assemblies)	5.0000	COOLING SYSTEM (CONT'D)
1.1000	Cylinder Block	5.4000B	Fan Shroud
1.1000A	Air Box Drains	5.5000A	Heat Exchanger or Keel Cooling
1.2000	Cylinder Head	5.6000A	Raw Water Pump
1.2000A	Engine Lifter Bracket	5.7000A	Water Filter
1.3000	Crankshaft, Oil Seals and Stabilizers		
1.3000A	Crankshaft Front Cover	6.0000	EXHAUST SYSTEM
1.3000B	Vibration Damper	6.1000A	Exhaust Manifold and/or Connections
1.3000C	Crankshaft Pulley	6.2000A	Exhaust Muffler and/or Connections
1.3000D	Crankshaft Pulley Belt		
1.4000A	Flywheel	7.0000	ELECTRICAL--INSTRUMENTS
1.5000A	Flywheel Housing	7.1000A	Battery Charging Generator
1.5000B	Flywheel Housing Adaptor	7.2000A	Battery Cables
1.6000	Connecting Rod and Piston	7.2000B	Automatic Starting
1.7000	Camshaft and Gear Train	7.2000B	Automatic Starting (Twin and Quad)
1.7000A	Balance Weight Cover	7.3000A	Starting Motor
1.7000B	Accessory Drive	7.4000A	Instruments
1.8000	Valve and Injector Operating Mechanism	7.4000A	Instruments (Twin and Quad)
1.8000A	Rocker Cover	7.4000B	Tachometer Drive
		7.4000B	Tachometer Drive (Twin and Quad)
2.0000	FUEL SYSTEM	7.4000C	Shutoff, Alarm and O.S. Governor
2.1000A	Fuel Injector	7.4000C	Shutoff, Alarm and O.S. Governor (Twin and Quad)
2.2000	Fuel Pump	7.5000A	Power Generator
2.2000A	Fuel Pump Drain	7.6000A	Control Cabinet
2.3000A	Fuel Filter and Strainer	7.6000A	Control Cabinet (Twin and Quad)
2.3000A	Fuel Filter and Strainer (Twin and Quad)	7.7000A	Wiring Harness
2.4000	Fuel Manifold and/or Connections	7.8000A	Air Heater
2.4000A	Dual Fuel System	7.8000A	Air Heater (Twin and Quad)
2.5000A	Fuel Lines and Fuel Cooler	7.10000A	Hydraulic Governor Solenoid
2.5000A	Fuel Lines and Fuel Cooler (Twin and Quad)		
2.6000A	Fuel Tank	8.0000	POWER TAKE-OFF
2.6000B	Electric Governor	8.1000A	Power Take-off and/or Clutch
2.7000A	Mechanical Governor	8.1000A	Power Take-off and/or Clutch (Twin and Quad)
2.8000A	Hydraulic Governor	8.3000A	Torque Converter
2.9000	Injector Controls	8.3000A	Torque Converter (Twin and Quad)
2.9000	Injector Controls (Twin and Quad)	8.3000B	Transmission Lines
2.9000A	Throttle Controls		
2.9000A	Throttle Controls (Twin and Quad)	9.0000	TRANSMISSION AND PROPULSION
3.0000	AIR SYSTEM	9.1000A	Hydraulic Marine Gear
3.1000A	Air Cleaner and/or Adaptor	9.1000A	Hydraulic Marine Gear (Twin and Quad)
3.2000A	Air Silencer	9.2000A	Reverse and Reduction Gear (mechanical)
3.3000A	Air Inlet Housing	9.3000A	Power Transfer Gear
3.4000	Blower and Drive	9.3000A	Power Transfer Gear (Twin and Quad)
3.4000A	Blower Drive Shaft	9.4000	Transmission--Highway
3.4000B	Blower End Plate Cover	9.7000	Transmission--Off-highway
3.5000A	Turbocharger, Intercooler, and Aftercooler	9.9000	Transmission--Rail Car
4.0000	LUBRICATING SYSTEM	10.0000	SHEET METAL
4.1000A	Oil Pump	10.1000A	Engine Hood
4.1000B	Oil Distribution System		
4.1000C	Oil Pressure Regulator	11.0000	ENGINE MOUNTING
4.2000A	Oil Filter	11.1000A	Engine Mounting and Base
4.3000A	Oil Filter Lines	11.1000A	Engine Mounting and Base (Twin and Quad)
4.4000A	Oil Cooler and Marine Gear Lines		
4.5000A	Oil Filler	12.0000	MISCELLANEOUS
4.6000A	Dipstick	12.2000A	Bilge Pump
4.7000A	Oil Pan	12.3000A	Vacuum Pump
4.8000A	Ventilating System	12.4000A	Air Compressor
5.0000	COOLING SYSTEM	12.5000A	Hydraulic Pump
5.1000	Fresh Water Pump	12.6000A	Gasoline Starter
5.1000A	Fresh Water Pump Cover	12.6000B	Air Starter
5.2000A	Water Outlet Manifold and/or Elbow	12.6000C	Cold Weather Starting Aid
5.2000B	Thermostat	12.6000D	Hydraulic Starter
5.2000C	Water Bypass Tube	12.6000E	Hydraulic Starter Accessories
5.3000A	Radiator	12.8000A	Supplies
5.3000B	Water Connections	12.8000B	Fabrication Material
5.4000A	Fan	12.8000C	Miscellaneous Service Kits and Sets
		12.8000D	Miscellaneous Service Parts

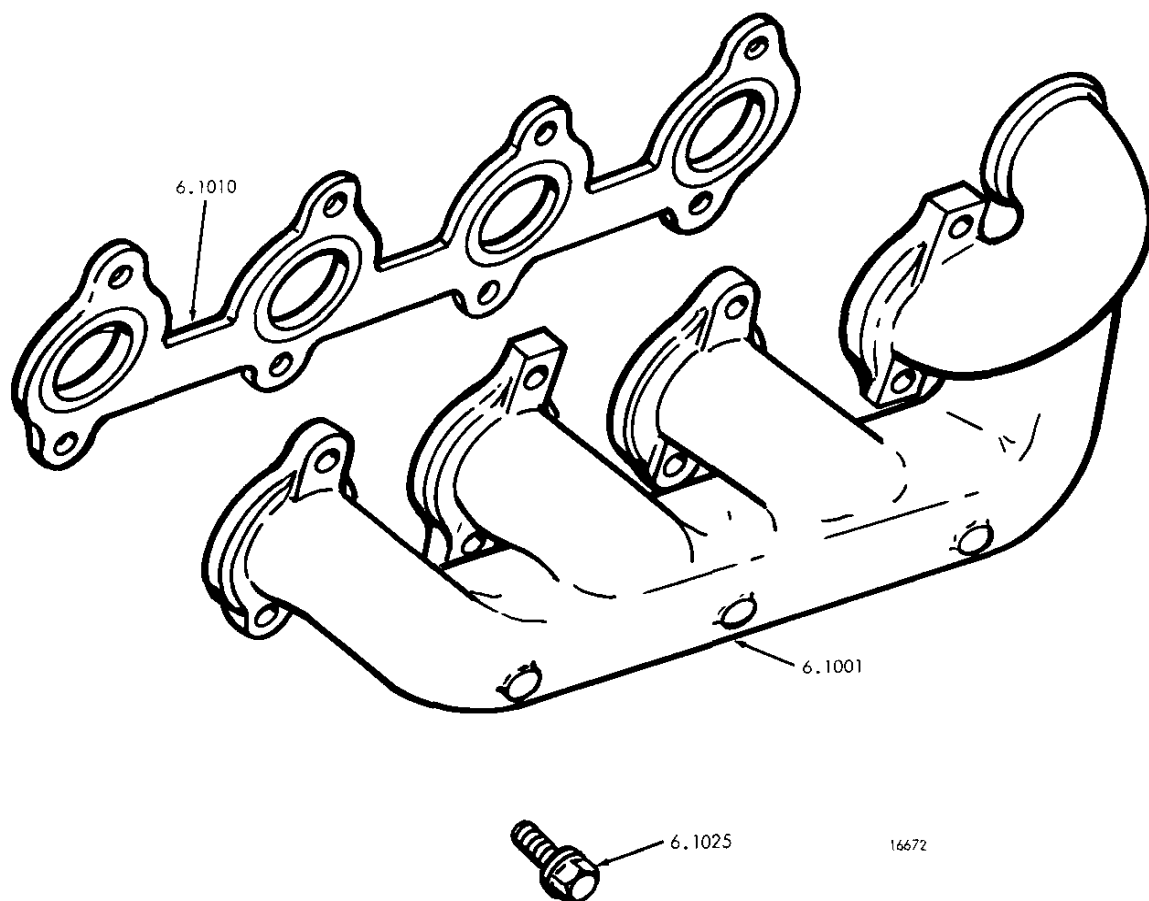


FIG. 1A EXHAUST MANIFOLD (end outlet, right bank)

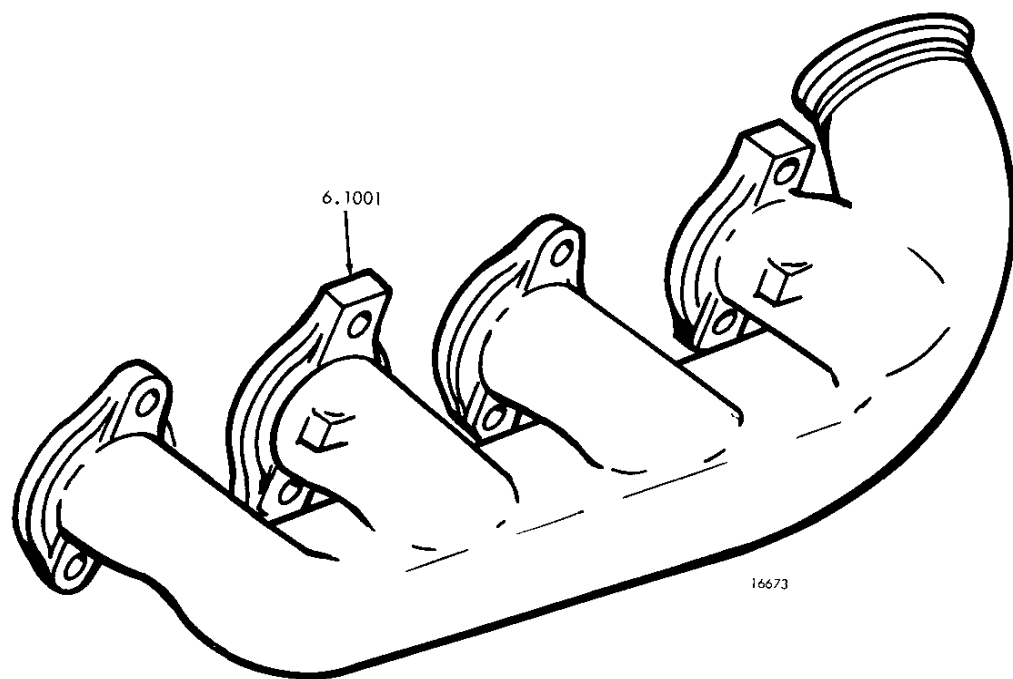


FIG. 1B EXHAUST MANIFOLD (end outlet, left bank)

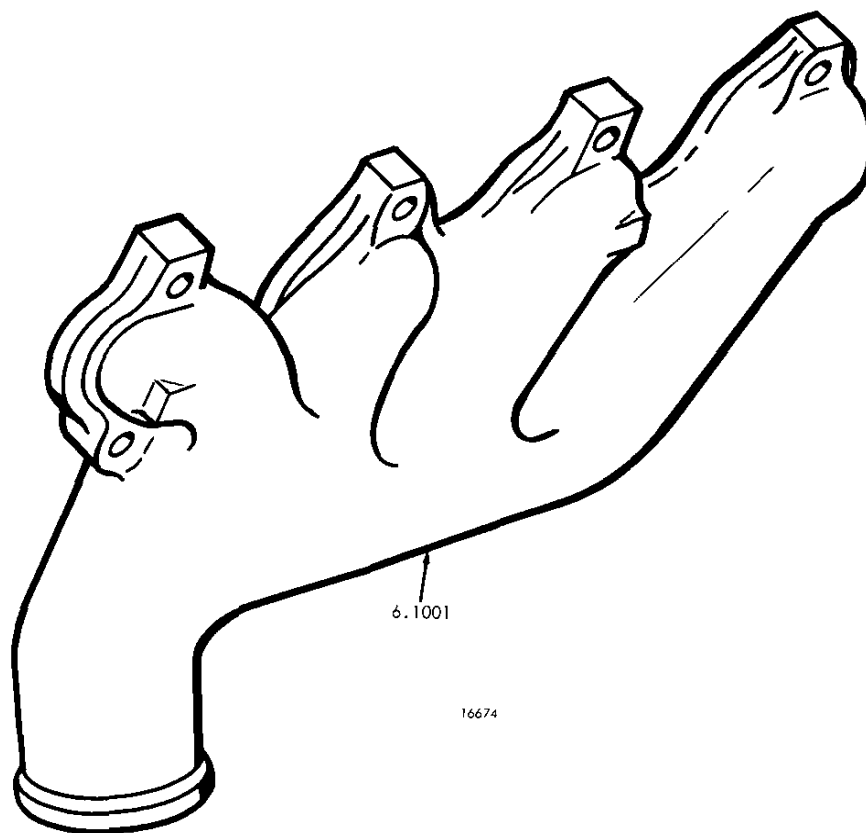


FIG. 1C EXHAUST MANIFOLD (end outlet, right & left bank)

## 6.1000A EXHAUST MANIFOLD AND/OR CONNECTIONS

PART ..FIG .. NUMBER .. NAME AND DESCRIPTION ..			TYPES											
			5 1 5	5 1 6	5 1 7	5 4 7								
<b>6.1001 - MANIFOLD, EXHAUST</b>														
1C	<b>8920189</b>	MANIFOLD (R. AND L. BANK) .....	2											
1A	<b>8920284</b>	MANIFOLD (R. BANK) .....		1										
1A	<b>8920285</b>	MANIFOLD (L. BANK) .....		1										
1B	<b>8921777</b>	MANIFOLD (R. BANK) .....			1									
1B	<b>8921776</b>	MANIFOLD (L. BANK) .....			1									
	<b>8922964</b>	MANIFOLD, WATER COOLED (R. BANK) .....				1								
	<b>8922965</b>	MANIFOLD, WATER COOLED (L. BANK) .....				1								
	<b>8924140</b>	DRAINCOCK, 1/4" (12.9510) .....				2								
	<b>5111798</b>	PLUG, 1" (12.9550) .....				8								
<b>6.1010 - GASKET, EXHAUST MANIFOLD</b>														
1A	<b>8921817</b>	GASKET .....	2	2	2	2								
<b>6.1025 - BOLT, EXHAUST MANIFOLD TO HEAD</b>														
1A	<b>8920105</b>	BOLT, M10 X 1.5 X 35.0 MM LOCK THD. ....	12	12	12									
	<b>8923131</b>	BOLT, M10X1.5X70.0 MM .....				8								
	<b>8923132</b>	BOLT, M10X1.5X115.0 MM .....				8								

## 6.2000A EXHAUST MUFFLER AND/OR CONNECTIONS

PART		NAME AND DESCRIPTION	TYPES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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## GROUP NOMENCLATURE

1.0000	ENGINE (less major assemblies)	5.0000	COOLING SYSTEM (CONT'D)
1.1000	Cylinder Block	5.4000B	Fan Shroud
1.1000A	Air Box Drains	5.5000A	Heat Exchanger or Keel Cooling
1.2000	Cylinder Head	5.6000A	Raw Water Pump
1.2000A	Engine Lifter Bracket	5.7000A	Water Filter
1.3000	Crankshaft, Oil Seals and Stabilizers		
1.3000A	Crankshaft Front Cover	6.0000	EXHAUST SYSTEM
1.3000B	Vibration Damper	6.1000A	Exhaust Manifold and/or Connections
1.3000C	Crankshaft Pulley	6.2000A	Exhaust Muffler and/or Connections
1.3000D	Crankshaft Pulley Belt		
1.4000A	Flywheel	7.0000	ELECTRICAL--INSTRUMENTS
1.5000A	Flywheel Housing	7.1000A	Battery Charging Generator
1.5000B	Flywheel Housing Adaptor	7.2000A	Battery Cables
1.6000	Connecting Rod and Piston	7.2000B	Automatic Starting
1.7000	Camshaft and Gear Train	7.2000B	Automatic Starting (Twin and Quad)
1.7000A	Balance Weight Cover	7.3000A	Starting Motor
1.7000B	Accessory Drive	7.4000A	Instruments
1.8000	Valve and Injector Operating Mechanism	7.4000A	Instruments (Twin and Quad)
1.8000A	Rocker Cover	7.4000B	Tachometer Drive
		7.4000B	Tachometer Drive (Twin and Quad)
2.0000	FUEL SYSTEM	7.4000C	Shutoff, Alarm and O.S. Governor
2.1000A	Fuel Injector	7.4000C	Shutoff, Alarm and O.S. Governor (Twin and Quad)
2.2000	Fuel Pump	7.5000A	Power Generator
2.2000A	Fuel Pump Drain	7.6000A	Control Cabinet
2.3000A	Fuel Filter and Strainer	7.6000A	Control Cabinet (Twin and Quad)
2.3000A	Fuel Filter and Strainer (Twin and Quad)	7.7000A	Wiring Harness
2.4000	Fuel Manifold and/or Connections	7.8000A	Air Heater
2.4000A	Dual Fuel System	7.8000A	Air Heater (Twin and Quad)
2.5000A	Fuel Lines and Fuel Cooler	7.10000A	Hydraulic Governor Solenoid
2.5000A	Fuel Lines and Fuel Cooler (Twin and Quad)		
2.6000A	Fuel Tank	8.0000	POWER TAKE-OFF
2.6000B	Electric Governor	8.1000A	Power Take-off and/or Clutch
2.7000A	Mechanical Governor	8.1000A	Power Take-off and/or Clutch (Twin and Quad)
2.8000A	Hydraulic Governor	8.3000A	Torque Converter
2.9000	Injector Controls	8.3000A	Torque Converter (Twin and Quad)
2.9000	Injector Controls (Twin and Quad)	8.3000B	Transmission Lines
2.9000A	Throttle Controls		
2.9000A	Throttle Controls (Twin and Quad)	9.0000	TRANSMISSION AND PROPULSION
3.0000	AIR SYSTEM	9.1000A	Hydraulic Marine Gear
3.1000A	Air Cleaner and/or Adaptor	9.1000A	Hydraulic Marine Gear (Twin and Quad)
3.2000A	Air Silencer	9.2000A	Reverse and Reduction Gear (mechanical)
3.3000A	Air Inlet Housing	9.3000A	Power Transfer Gear
3.4000	Blower and Drive	9.3000A	Power Transfer Gear (Twin and Quad)
3.4000A	Blower Drive Shaft	9.4000	Transmission--Highway
3.4000B	Blower End Plate Cover	9.7000	Transmission--Off-highway
3.5000A	Turbocharger, Intercooler, and Aftercooler	9.9000	Transmission--Rail Car
4.0000	LUBRICATING SYSTEM		
4.1000A	Oil Pump	10.0000	SHEET METAL
4.1000B	Oil Distribution System	10.1000A	Engine Hood
4.1000C	Oil Pressure Regulator		
4.2000A	Oil Filter	11.0000	ENGINE MOUNTING
4.3000A	Oil Filter Lines	11.1000A	Engine Mounting and Base
4.4000A	Oil Cooler and Marine Gear Lines	11.1000A	Engine Mounting and Base (Twin and Quad)
4.5000A	Oil Filler		
4.6000A	Dipstick	12.0000	MISCELLANEOUS
4.7000A	Oil Pan	12.2000A	Bilge Pump
4.8000A	Ventilating System	12.3000A	Vacuum Pump
		12.4000A	Air Compressor
5.0000	COOLING SYSTEM	12.5000A	Hydraulic Pump
5.1000	Fresh Water Pump	12.6000A	Gasoline Starter
5.1000A	Fresh Water Pump Cover	12.6000B	Air Starter
5.2000A	Water Outlet Manifold and/or Elbow	12.6000C	Cold Weather Starting Aid
5.2000B	Thermostat	12.6000D	Hydraulic Starter
5.2000C	Water Bypass Tube	12.6000E	Hydraulic Starter Accessories
5.3000A	Radiator	12.8000A	Supplies
5.3000B	Water Connections	12.8000B	Fabrication Material
5.4000A	Fan	12.8000C	Miscellaneous Service Kits and Sets
		12.8000D	Miscellaneous Service Parts

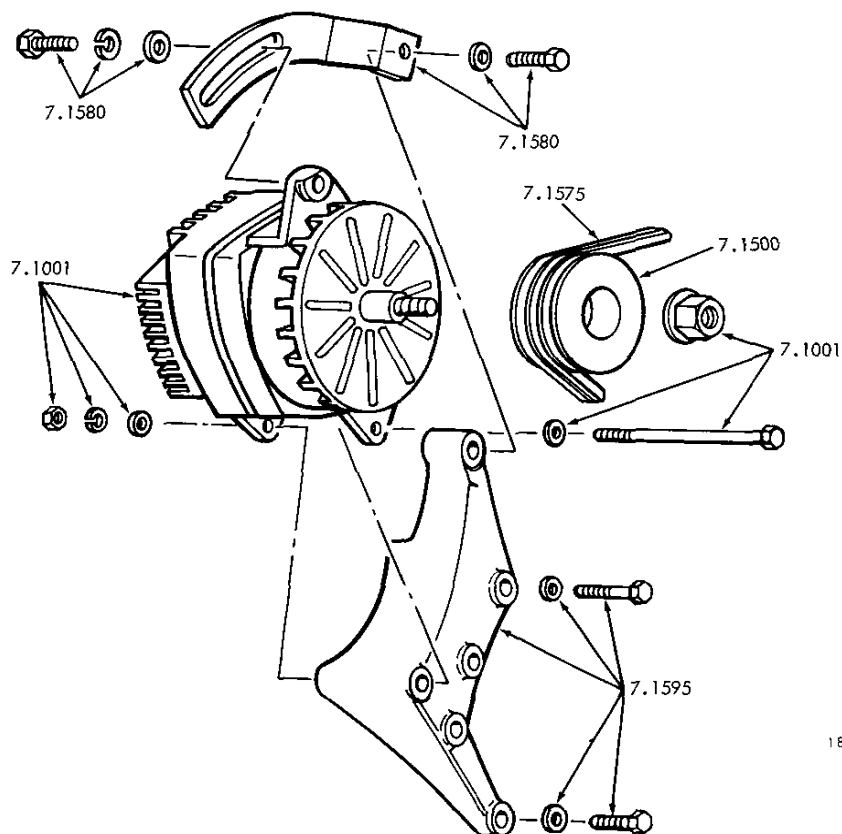
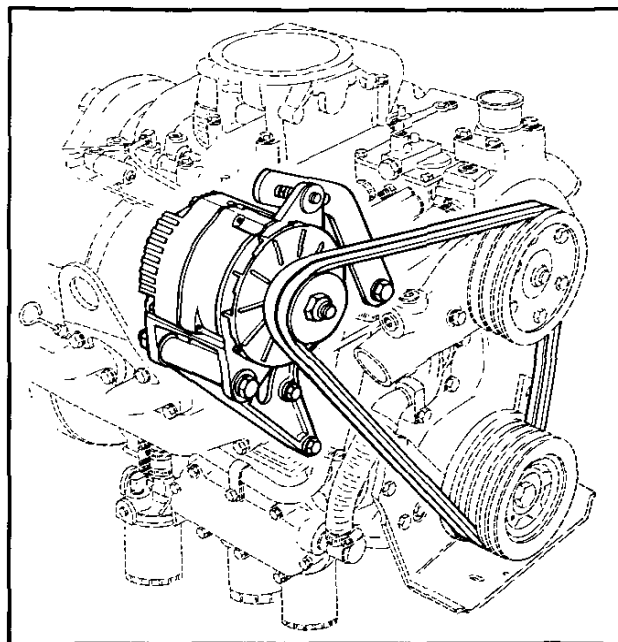


FIG. 1A BATTERY CHARGING GENERATOR

Fig. 1A of 7.0000

March, 1982

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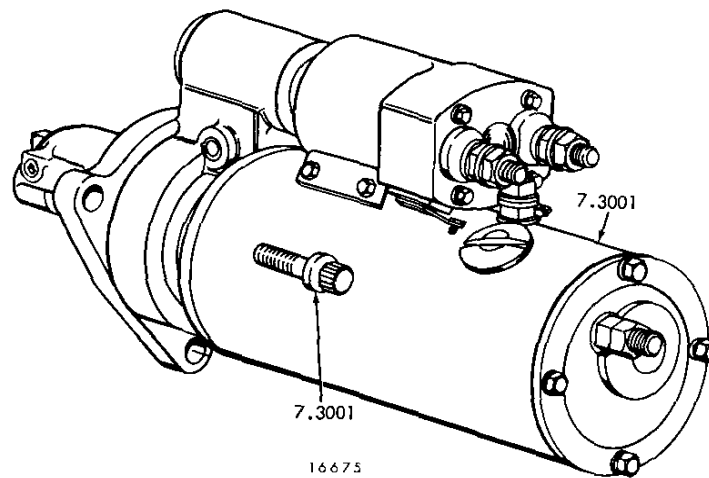


FIG. 3A STARTING MOTOR

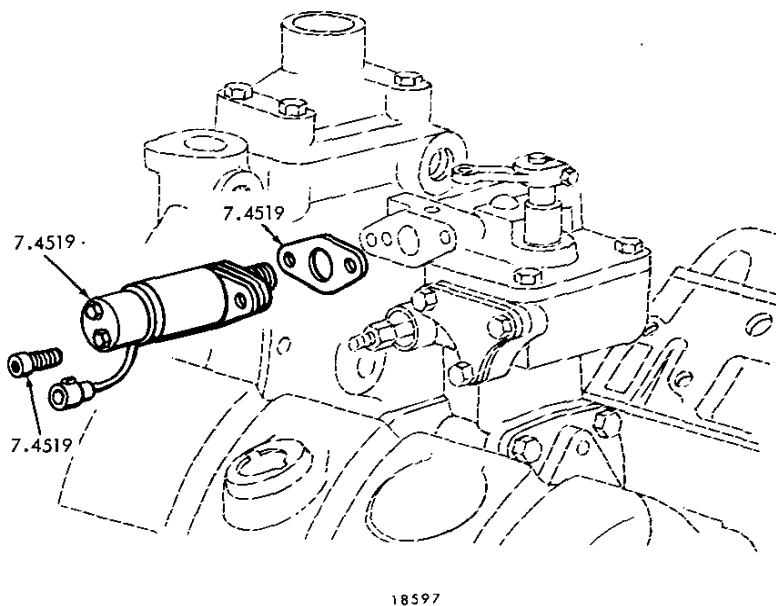


FIG. 4A AIR SHUT-OFF SOLENOID

Figs. 3A & 4A of 7.0000

## 7.1000A BATTERY, CHARGING GENERATOR

PART			TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	2	2	2	2	2	2	2	2	2	2	2	2
			1	1	1	1	1	1	1	1	1	1	1	1
			6	7	0	6	8	9	0	9	3	5	5	5
<b>7.1001 - GENERATOR ASSY.</b>														
NOTE: SERVICE ON ELECTRICAL EQUIPMENT (*) IN THIS SECTION IS HANDLED THRU AC DELCO.														
	<b>NPN</b>	GENERATOR, CUSTOMER FURNISHED	1					1	1					
1A	<b>1100081</b>	* GENERATOR, 12V. 65 AMP. AC		1										
1A	<b>1105069</b>	* GENERATOR, 12V. 42 AMP. AC			1	1								
1A	<b>1105539</b>	* GENERATOR, 12V. 105 AMP. AC					1							
1A	<b>1105463</b>	* GENERATOR, 12V. 65 AMP. AC								1				
1A	<b>1105476</b>	* GENERATOR, 24V. 65 AMP. AC									1			
1A	<b>1105510</b>	* GENERATOR, 24V. 40 AMP. AC										1		
1A	<b>1105063</b>	* GENERATOR, 12V. 18 AMP. AC											1	
1A	<b>455537</b>	BOLT, 3/8"-16X4" (12.9001)				1	1	1	1			1	1	
1A	<b>9427945</b>	BOLT, 1/2"-13X6 1/4"	1	1						1	1			
1A	<b>5131433</b>	WASHER, .41"X.81"X.14" (1.5001)				2	2	2	2			2	2	
1A	<b>5132715</b>	WASHER, .53" I.D.X.12" THK. (1.3140)	2	2						2	2			
1A	<b>103321</b>	LOCKWASHER, 3/8" (12.9200)				1	1	1	1			1	1	
1A	<b>103323</b>	LOCKWASHER, 1/2" (12.9200)	1	1						1	1			
1A	<b>102635</b>	NUT, 3/8"-16 (12.9120)				1	1	1	1			1	1	
1A	<b>102637</b>	NUT, 1/2"-13 (12.9120)	1	1						1				
<b>7.1440 - FAN, GENERATOR</b>														
	<b>1959703</b>	* FAN			1	1						1	1	
	<b>1978026</b>	* FAN					1							
<b>7.1500 - PULLEY, GENERATOR</b>														
1A	<b>8922530</b>	PULLEY, 3 GRV. .500"X83.0 MM O.D.		1						1	1			
1A	<b>8923076</b>	PULLEY, 2 GRV. .500"X82.5 MM O.D.			1									
1A	<b>8923595</b>	PULLEY, 3 GRV. .500"X83.0 MM O.D.				1	1					1	1	
<b>7.1575 - BELT, GENERATOR DRIVE</b>														
1A	<b>5141155</b>	BELT SET, .500"X1.00" L (1.3320)		1		1	1				1	1		
	<b>5136272</b>	BELT SET, .500"X52.00" L			1									
<b>7.1580 - STRAP, GENERATOR ADJUSTING</b>														
1A	<b>8922529</b>	STRAP	1	1						1	1			
1A	<b>8923075</b>	STRAP			1									
1A	<b>8923594</b>	STRAP				1	1	1	1			1	1	
	<b>11500868</b>	BOLT, M8X1.25X30.0 MM (12.9001)			1							1	1	
1A	<b>11500929</b>	BOLT, M10X1.5X25 MM (12.9001)	1	1		1	1	1	1	1	1	1	1	
	<b>11500724</b>	BOLT, M10X1.5X30 MM (12.9001)					1							
	<b>8922036</b>	BOLT, M10X1.5X40.0 MM (12.9001)				1								
1A	<b>442733</b>	BOLT, 1/2"-13X1 1/4" (12.9001)		1						1	1			
1A	<b>11502474</b>	WASHER, PLAIN M10 (12.9190)	1	1		1	2	1	1	1	1	1	1	
1A	<b>5117082</b>	WASHER, PLAIN 1/2"		1						1	1			
	<b>11500191</b>	LOCKWASHER, M8 (12.9200)			1							1	1	
1A	<b>103323</b>	LOCKWASHER, 1/2" (12.9200)		1						1	1			
<b>7.1581 - SPACER, GENERATOR ADJUSTING STRAP</b>														
	<b>5164294</b>	SPACER, 7/8"-13/32X1/8" THK.			1									

## 7.1000A BATTERY, CHARGING GENERATOR

PART		TYPES												
FIG	NUMBER	NAME AND DESCRIPTION	2 1 1 6	2 1 1 7	2 1 3 0	2 1 3 6	2 1 3 8	2 1 3 9	2 1 4 0	2 1 5 9	2 1 6 3	2 1 6 5	2 1 7 5	
		<b>7.1582 - BRACKET, GENERATOR ADJUSTING STRAP</b>												
	5102729	BRACKET				1		1				1	1	
	11500868	BOLT, M8X1.25X30.0 MM (12.9001)				1								
	186624	BOLT, 5/16"-18X1 1/4" (12.9001)				1		1				1	1	
	5121403	WASHER, 2 1/64"X1"X3/16" (3.4080)				1		1				1	1	
	11500191	LOCKWASHER, M8 (12.9200)				1								
	103320	LOCKWASHER, 5/16" (12.9200)				1		1				1	1	
	120376	NUT, 5/16"-18 (12.9120)				1		1				1	1	
		<b>7.1595 - BRACKET, GENERATOR MOUNTING</b>												
1A	8922528	BRACKET	1	1						1	1			
	8923074	BRACKET			1									
	8923593	BRACKET				1	1	1	1			1	1	
	5137947	BUSHING, SLOTTED .72" L				1	1	1	1			1	1	
	11500724	BOLT, M10X1.5X30.0 MM (12.9001)			2	4								
1A	11500932	BOLT, M10X1.5X40 MM (12.9001)	3	3		3	3	3	3	3	3	3	3	
1A	11500934	BOLT, M10X1.5X60 MM (12.9001)	1	1		1	1	1	1	1	1	1	1	
	11500730	BOLT, M10X1.5X110.0 MM (12.9001)			1									
	5131433	WASHER, .41"X.81"X.1345" (1.5001)			2									
1A	11502474	WASHER, PLAIN M10 (12.9190)	1	1			4	4	4	4	4	4	4	
	11500192	LOCKWASHER, M10 (12.9200)			1									
	11501052	NUT, M10X1.5 (12.9120)			1									
		<b>7.1630 - WIRE ASSY., GENERATOR TO REGULATOR</b>												
	5100420	WIRE ASSY., 12 & 24 VOLT			1	1						1	1	
	11504530	NUT, M6 (12.9120)			1	1						1	1	

## . TYPES

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## 7.4000C SHUTOFF, ALARM SYSTEM AND O.S GOVERNOR

PART		NAME AND DESCRIPTION	TYPES											
FIG	NUMBER		1	0	1	0	1	1	1	1	1	1	1	1
			4	1	5									
<b>7.4519 - SOLENOID, AIR SHUTOFF OR GOVERNOR</b>														
4A	<b>8923206</b>	SOLENOID 12V. ....	1											
	<b>8921034</b>	COVER .....			1									
4A	<b>8921033</b>	GASKET, SOLENOID MOUNTING .....	1		1									
	<b>8927033</b>	GASKET (BETWEEN SOLENOID AND PLUNGER ASSY.) .....		1										
4A	<b>179795</b>	BOLT, 1/4"-20 X 3/4" (12.9001) .....	2		2									

## GROUP NOMENCLATURE

1.0000	ENGINE (less major assemblies)	5.0000	COOLING SYSTEM (CONT'D)
1.1000	Cylinder Block	5.4000B	Fan Shroud
1.1000A	Air Box Drains	5.5000A	Heat Exchanger or Keel Cooling
1.2000	Cylinder Head	5.6000A	Raw Water Pump
1.2000A	Engine Lifter Bracket	5.7000A	Water Filter
1.3000	Crankshaft, Oil Seals and Stabilizers		
1.3000A	Crankshaft Front Cover	6.0000	EXHAUST SYSTEM
1.3000B	Vibration Damper	6.1000A	Exhaust Manifold and/or Connections
1.3000C	Crankshaft Pulley	6.2000A	Exhaust Muffler and/or Connections
1.3000D	Crankshaft Pulley Belt		
1.4000A	Flywheel	7.0000	ELECTRICAL--INSTRUMENTS
1.5000A	Flywheel Housing	7.1000A	Battery Charging Generator
1.5000B	Flywheel Housing Adaptor	7.2000A	Battery Cables
1.6000	Connecting Rod and Piston	7.2000B	Automatic Starting
1.7000	Camshaft and Gear Train	7.2000B	Automatic Starting (Twin and Quad)
1.7000A	Balance Weight Cover	7.3000A	Starting Motor
1.7000B	Accessory Drive	7.4000A	Instruments
1.8000	Valve and Injector Operating Mechanism	7.4000A	Instruments (Twin and Quad)
1.8000A	Rocker Cover	7.4000B	Tachometer Drive
		7.4000B	Tachometer Drive (Twin and Quad)
2.0000	FUEL SYSTEM	7.4000C	Shutoff, Alarm and O.S. Governor
2.1000A	Fuel Injector	7.4000C	Shutoff, Alarm and O.S. Governor (Twin and Quad)
2.2000	Fuel Pump	7.5000A	Power Generator
2.2000A	Fuel Pump Drain	7.6000A	Control Cabinet
2.3000A	Fuel Filter and Strainer	7.6000A	Control Cabinet (Twin and Quad)
2.3000A	Fuel Filter and Strainer (Twin and Quad)	7.7000A	Wiring Harness
2.4000	Fuel Manifold and/or Connections	7.8000A	Air Heater
2.4000A	Dual Fuel System	7.8000A	Air Heater (Twin and Quad)
2.5000A	Fuel Lines and Fuel Cooler	7.10000A	Hydraulic Governor Solenoid
2.5000A	Fuel Lines and Fuel Cooler (Twin and Quad)		
2.6000A	Fuel Tank	8.0000	POWER TAKE-OFF
2.6000B	Electric Governor	8.1000A	Power Take-off and/or Clutch
2.7000A	Mechanical Governor	8.1000A	Power Take-off and/or Clutch (Twin and Quad)
2.8000A	Hydraulic Governor	8.3000A	Torque Converter
2.9000	Injector Controls	8.3000A	Torque Converter (Twin and Quad)
2.9000	Injector Controls (Twin and Quad)	8.3000B	Transmission Lines
2.9000A	Throttle Controls		
2.9000A	Throttle Controls (Twin and Quad)	9.0000	TRANSMISSION AND PROPULSION
3.0000	AIR SYSTEM	9.1000A	Hydraulic Marine Gear
3.1000A	Air Cleaner and/or Adaptor	9.1000A	Hydraulic Marine Gear (Twin and Quad)
3.2000A	Air Silencer	9.2000A	Reverse and Reduction Gear (mechanical)
3.3000A	Air Inlet Housing	9.3000A	Power Transfer Gear
3.4000	Blower and Drive	9.3000A	Power Transfer Gear (Twin and Quad)
3.4000A	Blower Drive Shaft	9.4000	Transmission--Highway
3.4000B	Blower End Plate Cover	9.7000	Transmission--Off-highway
3.5000A	Turbocharger, Intercooler, and Aftercooler	9.9000	Transmission--Rail Car
4.0000	LUBRICATING SYSTEM	10.0000	SHEET METAL
4.1000A	Oil Pump	10.1000A	Engine Hood
4.1000B	Oil Distribution System		
4.1000C	Oil Pressure Regulator	11.0000	ENGINE MOUNTING
4.2000A	Oil Filter	11.1000A	Engine Mounting and Base
4.3000A	Oil Filter Lines	11.1000A	Engine Mounting and Base (Twin and Quad)
4.4000A	Oil Cooler and Marine Gear Lines		
4.5000A	Oil Filler	12.0000	MISCELLANEOUS
4.6000A	Dipstick	12.2000A	Bilge Pump
4.7000A	Oil Pan	12.3000A	Vacuum Pump
4.8000A	Ventilating System	12.4000A	Air Compressor
5.0000	COOLING SYSTEM	12.5000A	Hydraulic Pump
5.1000	Fresh Water Pump	12.6000A	Gasoline Starter
5.1000A	Fresh Water Pump Cover	12.6000B	Air Starter
5.2000A	Water Outlet Manifold and/or Elbow	12.6000C	Cold Weather Starting Aid
5.2000B	Thermostat	12.6000D	Hydraulic Starter
5.2000C	Water Bypass Tube	12.6000E	Hydraulic Starter Accessories
5.3000A	Radiator	12.8000A	Supplies
5.3000B	Water Connections	12.8000B	Fabrication Material
5.4000A	Fan	12.8000C	Miscellaneous Service Kits and Sets
		12.8000D	Miscellaneous Service Parts

## 8.1000A POWER TAKEOFF AND/OR CLUTCH

PART ..FIG .. NUMBER .....		NAME AND DESCRIPTION .....		TYPES .....											
				3 7 3	3 7 4	3 7 5	3 7 6								
<b>8.1001 - POWER TAKEOFF ASSY.</b>															
INCLUDES ITEMS IN 8.1001 THRU 8.1700.															
8923410		POWER TAKE-OFF ASSY. ....	1												
8923409		POWER TAKE-OFF ASSY. ....		1											
8923407		POWER TAKE-OFF ASSY. ....				1									
8923408		POWER TAKE-OFF ASSY. ....					1								
8924411		KEY, 5/8"X4.88"L. ....	1												
5192156		KEY, 5/8"X5.25"L. ....			1	1	1								
138666		SCREW, SET (12.9076) ....	1	1	1	1	1								
11500878		BOLT, M10X1.5X25.0MM ....	12	12	12	12	12								
186628		BOLT, 3/8"-16X1 1/2" (12.9001) ....	8				8								
427588		BOLT, 3/8"-16X2 1/2" (12.9001) ....			8	8	8								
103321		LOCKWASHER, 3/8" (12.9200) ....	8	8	8	8	8								
<b>8.1010 - HOUSING, CLUTCH</b>															
8923763		HOUSING (SAE 2) ....	1												
8923764		HOUSING (SAE 2) ....		1											
8923765		HOUSING (SAE 2) ....				1									
8923766		HOUSING (SAE 2) ....					1								
<b>8.1017 - CLUTCH ASSY.</b>															
A CLUTCH ASSY. INCLUDES ITEMS IN 8.1030, 8.1080, 8.1100, 8.1135, 8.1142, 8.1144, 8.1145, 8.1285, 8.1295 AND 8.1315.															
8924407		CLUTCH ASSY., 11 1/2" ....	1				1								
5196452		CLUTCH ASSY., 11 1/2" ....		1											
8924397		CLUTCH ASSY., 11 1/2" ....				1									
5193450		KEY, 3/8"X1 1/2"X2 1/4" ....	1				1								
5197229		KEY, 1/2"X3 1/4" ....		1	1										
<b>8.1018 - RING, CLUTCH DRIVING</b>															
5192163		RING, 11 1/2"X7/8" WIDE ....	1				1								
5194954		RING, 11 1/2"X1 7/8" WIDE ....			1	1									
<b>8.1020 - DISC ASSY., CLUTCH</b>															
8924400		DISC DRIVE ....				2									
<b>8.1030 - FACING, CLUTCH</b>															
8924408		FACING ....	1				1								
5197884		FACING ....		2											
<b>8.1060 - COVER, CLUTCH HOUSING INSPECTION HOLE</b>															
5199882		COVER ....	1	1											
5149358		COVER ....				1	1								
131375		SCREW, 1/4"-20X3/8" RD. HD. (12.9025) ....	2	2	2	2	2								

## 8.1000A POWER TAKEOFF AND/OR CLUTCH

PART ..FIG .. NUMBER .....		NAME AND DESCRIPTION .....		TYPES											
				3 7 3	3 7 4	3 7 5	3 7 6								
		<b>8.1070 - GASKET, CLUTCH HOUSING INSPECTION HOLE COVER</b>													
5192415		GASKET .....		1	1	1	1								
		<b>8.1080 - PLATE, CLUTCH PRESSURE</b>													
5194141		PLATE, OUTER .....		1			1								
5194290		PLATE, INNER .....		1	1		1								
8924401		PLATE, INNER .....				1									
5194951		PLATE, CENTER .....			1	1									
5197112		PLATE, OUTER .....			1	1									
		<b>8.1100 - SPRING, CLUTCH TOGGLE LEVER</b>													
5194138		SPRING .....		1	1	1	1								
		<b>8.1135 - SPRING, CLUTCH PRESSURE PLATE RETURN</b>													
5193431		SPRING, COIL .....		3			3								
5194952		SPRING, COIL .....			3	3									
		<b>8.1142 - LEVER, CLUTCH RELEASE YOKE</b>													
5194140		LEVER .....		3	3	3	3								
5193422		PIN, 3/32"X1 1/4" CLEVIS .....		3	3	3	3								
5194953		PIN, 5/16"X1 1/2" SPRING (12.9300) .....			3	3									
5192142		RING, RETAINING .....		3	3	3	3								
		<b>8.1144 - NUT, CLUTCH ADJUSTING</b>													
5197883		NUT, 7 1/2"-16 .....		1	1	1	1								
		<b>8.1145 - LOCK, CLUTCH ADJUSTING NUT</b>													
5196867		LOCK .....		1	1	1	1								
179789		BOLT, 1/4"-20X3/8" (12.9001) .....		1			1								
179798		BOLT, 1/4"-20X1 1/8" (12.9001) .....			1	1									
114604		LOCKWASHER, 1/4" EXT. TOOTH (12.9210) .....		1	1	1	1								
		<b>8.1146 - PLATE, CLUTCH ADJUSTING NUT WEAR</b>													
5197882		PLATE, WEAR .....		1	1	1	1								
		<b>8.1270 - SHAFT, CLUTCH RELEASE</b>													
5192251		SHAFT .....		1	1	1	1								
145692		FITTING, 1/4" LUBE (12.9540) .....		2	2	2	2								



## 8.1000A POWER TAKEOFF AND/OR CLUTCH

PART		TYPES													
FIG	NUMBER	NAME AND DESCRIPTION	3 7 3	3 7 4	3 7 5	3 7 6									
		<b>8.1275 - YOKE, CLUTCH RELEASE</b>													
		A YOKE ASSY. INCLUDES BOLT AND LOCKWASHER IN 8.1275.													
	5192150	YOKE ASSY. ....	1			1									
	5197111	YOKE ASSY. ....		1	1										
	113782	KEY, 1/4"X1" WOODRUFF (12.9350) ....	2	2	2	2									
	186622	BOLT, 3/8"-16X1 1/4" (12.9001) ....	2	2	2	2									
	103321	LOCKWASHER, 3/8" (12.9200) ....	2	2	2	2									
		<b>8.1285 - SLEEVE, CLUTCH RELEASE</b>													
	5193432	SLEEVE ....	1			1									
	5197113	SLEEVE ....		1	1										
		<b>8.1295 - COLLAR, CLUTCH RELEASE</b>													
	5196715	BEARING ASSY. ....	1			1									
	5197114	BEARING ASSY. ....		1	1										
	100018	BOLT, 5/16"-24X2" (12.9001) ....	2			2									
	106288	BOLT, 3/8"-24X2 1/4" (12.9001) ....		2	2										
	214279	NUT, 5/16"-24 (12.9120) ....	2			2									
	192481	NUT, 3/8"-24 (12.9120) ....		2	2										
		<b>8.1315 - LINK, CLUTCH RELEASE YOKE</b>													
	5193421	LINK ....	6	6	6	6									
	5193420	PIN, 5/16"X11/16" CLEVIS ....	6	6	6	6									
	5192176	RING, RETAINING ....	6	6	6	6									
		<b>8.1320 - HOSE, CLUTCH RELEASE BEARING</b>													
	5192295	HOSE ASSY., 7/16" O.D.X8 15/16"L. ....	1	1	1	1									
	191758	FITTING, 1/8" LUBE (12.9540) ....	3	3	3	3									
	122366	NUT, 5/8"-18 (12.9120) ....	1	1	1	1									
		<b>8.1450 - BEARING, CLUTCH PILOT</b>													
	954427	BEARING (N.D. 5606W/LIC) ....	1	1											
	907594	BEARING (N.D. Z99606X1C) ....			1	1									
		<b>8.1470 - LEVER, CLUTCH HAND CONTROL</b>													
		A LEVER ASSY. INCLUDES BOLT AND LOCKWASHER IN 8.1470.													
	3290211	LEVER ASSY. ....	1	1	1	1									
	186628	BOLT, 3/8"-16X1 1/2" (12.9001) ....	1	1	1	1									
	103321	LOCKWASHER, 3/8" (12.9200) ....	1	1	1	1									
		<b>8.1670 - SHAFT, CLUTCH DRIVE</b>													
	8924410	SHAFT, 19.62"L. (END LUBE) ....	1												
	8924394	SHAFT, 20.0"L. (SIDE OR END LUBE) ....		1											
	8924481	SHAFT, 20.0"L. (SIDE LUBE) ....			1										
	8924404	SHAFT, 19.62"L. (SIDE LUBE) ....				1									
	8924380	PLUG, 1/8" (12.9550) ....		1											

## 8.1000A POWER TAKEOFF AND/OR CLUTCH

FIG	PART NUMBER	NAME AND DESCRIPTION	TYPES													
			3 7 3	3 7 4	3 7 5	3 7 6										
		<b>8.1670 - SHAFT, CLUTCH DRIVE (CONT'D)</b>														
	5192154	LOCKWASHER, 1 5/16" .....	1			1										
	5197559	LOCKWASHER, 25/32" .....		1	1											
	5192153	NUT, 1 5/16"-12 .....	1			1										
	5197558	NUT, 1 3/4"-10 .....		1	1											
		<b>8.1680 - BEARING, CLUTCH DRIVE SHAFT</b>														
	443749	BEARING .....	2													
	453812	BEARING .....		2												
	8924395	BEARING .....			1											
	8924403	BEARING .....				1										
	8924399	RING, SNAP .....			2											
	8924405	RING, SNAP .....				2										
		<b>8.1690 - RETAINER, CLUTCH DRIVE SHAFT BEARING</b>														
	5192149	RETAINER .....	1			1										
	5197004	RETAINER .....		1												
	8924396	RETAINER .....			1											
		<b>8.1695 - SPACER, CLUTCH DRIVE SHAFT BEARING RETAINER</b>														
	5199891	SPACER (8.1945) .....				1										
		<b>8.1700 - LOCK, CLUTCH DRIVE SHAFT BEARING RETAINER</b>														
	3223379	LOCK .....	1	1	1	1										
	179812	BOLT, 5/16"-18X1/2" (12.9001) .....	1	1	1	1										
	103320	LOCKWASHER, 5/16" (12.9200) .....	1	1	1	1										

## GROUP NOMENCLATURE

1.0000	ENGINE (less major assemblies)	5.0000	COOLING SYSTEM (CONT'D)
1.1000	Cylinder Block	5.4000B	Fan Shroud
1.1000A	Air Box Drains	5.5000A	Heat Exchanger or Keel Cooling
1.2000	Cylinder Head	5.6000A	Raw Water Pump
1.2000A	Engine Lifter Bracket	5.7000A	Water Filter
1.3000	Crankshaft, Oil Seals and Stabilizers		
1.3000A	Crankshaft Front Cover	6.0000	EXHAUST SYSTEM
1.3000B	Vibration Damper	6.1000A	Exhaust Manifold and/or Connections
1.3000C	Crankshaft Pulley	6.2000A	Exhaust Muffler and/or Connections
1.3000D	Crankshaft Pulley Belt		
1.4000A	Flywheel	7.0000	ELECTRICAL--INSTRUMENTS
1.5000A	Flywheel Housing	7.1000A	Battery Charging Generator
1.5000B	Flywheel Housing Adaptor	7.2000A	Battery Cables
1.6000	Connecting Rod and Piston	7.2000B	Automatic Starting
1.7000	Camshaft and Gear Train	7.2000B	Automatic Starting (Twin and Quad)
1.7000A	Balance Weight Cover	7.3000A	Starting Motor
1.7000B	Accessory Drive	7.4000A	Instruments
1.8000	Valve and Injector Operating Mechanism	7.4000A	Instruments (Twin and Quad)
1.8000A	Rocker Cover	7.4000B	Tachometer Drive
		7.4000B	Tachometer Drive (Twin and Quad)
2.0000	FUEL SYSTEM	7.4000C	Shutoff, Alarm and O.S. Governor
2.1000A	Fuel Injector	7.4000C	Shutoff, Alarm and O.S. Governor (Twin and Quad)
2.2000	Fuel Pump	7.5000A	Power Generator
2.2000A	Fuel Pump Drain	7.6000A	Control Cabinet
2.3000A	Fuel Filter and Strainer	7.6000A	Control Cabinet (Twin and Quad)
2.3000A	Fuel Filter and Strainer (Twin and Quad)	7.7000A	Wiring Harness
2.4000	Fuel Manifold and/or Connections	7.8000A	Air Heater
2.4000A	Dual Fuel System	7.8000A	Air Heater (Twin and Quad)
2.5000A	Fuel Lines and Fuel Cooler	7.10000A	Hydraulic Governor Solenoid
2.5000A	Fuel Lines and Fuel Cooler (Twin and Quad)		
2.6000A	Fuel Tank	8.0000	POWER TAKE-OFF
2.6000B	Electric Governor	8.1000A	Power Take-off and/or Clutch
2.7000A	Mechanical Governor	8.1000A	Power Take-off and/or Clutch (Twin and Quad)
2.8000A	Hydraulic Governor	8.3000A	Torque Converter
2.9000	Injector Controls	8.3000A	Torque Converter (Twin and Quad)
2.9000	Injector Controls (Twin and Quad)	8.3000B	Transmission Lines
2.9000A	Throttle Controls		
2.9000A	Throttle Controls (Twin and Quad)	9.0000	TRANSMISSION AND PROPULSION
3.0000	AIR SYSTEM	9.1000A	Hydraulic Marine Gear
3.1000A	Air Cleaner and/or Adaptor	9.1000A	Hydraulic Marine Gear (Twin and Quad)
3.2000A	Air Silencer	9.2000A	Reverse and Reduction Gear (mechanical)
3.3000A	Air Inlet Housing	9.3000A	Power Transfer Gear
3.4000	Blower and Drive	9.3000A	Power Transfer Gear (Twin and Quad)
3.4000A	Blower Drive Shaft	9.4000	Transmission--Highway
3.4000B	Blower End Plate Cover	9.7000	Transmission--Off-highway
3.5000A	Turbocharger, Intercooler, and Aftercooler	9.9000	Transmission--Rail Car
4.0000	LUBRICATING SYSTEM	10.0000	SHEET METAL
4.1000A	Oil Pump	10.1000A	Engine Hood
4.1000B	Oil Distribution System		
4.1000C	Oil Pressure Regulator	11.0000	ENGINE MOUNTING
4.2000A	Oil Filter	11.1000A	Engine Mounting and Base
4.3000A	Oil Filter Lines	11.1000A	Engine Mounting and Base (Twin and Quad)
4.4000A	Oil Cooler and Marine Gear Lines		
4.5000A	Oil Filler	12.0000	MISCELLANEOUS
4.6000A	Dipstick	12.2000A	Bilge Pump
4.7000A	Oil Pan	12.3000A	Vacuum Pump
4.8000A	Ventilating System	12.4000A	Air Compressor
		12.5000A	Hydraulic Pump
5.0000	COOLING SYSTEM	12.6000A	Gasoline Starter
5.1000	Fresh Water Pump	12.6000B	Air Starter
5.1000A	Fresh Water Pump Cover	12.6000C	Cold Weather Starting Aid
5.2000A	Water Outlet Manifold and/or Elbow	12.6000D	Hydraulic Starter
5.2000B	Thermostat	12.6000E	Hydraulic Starter Accessories
5.2000C	Water Bypass Tube	12.8000A	Supplies
5.3000A	Radiator	12.8000B	Fabrication Material
5.3000B	Water Connections	12.8000C	Miscellaneous Service Kits and Sets
5.4000A	Fan	12.8000D	Miscellaneous Service Parts

## 9.1000A HYDRAULIC MARINE GEAR

PART		TYPES									
FIG	NUMBER	NAME AND DESCRIPTION	1	0	1	0	1	0	1	0	1
			7	7	7	7	8	8	8	8	5
			6	7	7	5					
<b>9.1001 - GEAR ASSY., HYDRAULIC MARINE</b>											
PROCURE ASSEMBLIES OR COMPONENTS THRU TWIN DISC INC. 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET. FURNISH TWIN DISC NO.											
<b>8924251</b>		GEAR ASSY., 1.54:1 MG502 TWIN DISC									
		#X9994A	1								
<b>8924342</b>		GEAR ASSY., 2:1 MG502A TWIN DISC									
		#X9994A				1					
<b>8921936</b>		BOLT, 7/16"-14X1 1/4" (12.9001)	6	6							
<b>191309</b>		BOLT, 7/16"-14X2 1/8" (12.9001)	2	2							
<b>9.1006 - COUPLING, MARINE GEAR DRIVE</b>											
<b>5129638</b>		COUPLING	1	1	1						
<b>8923226</b>		BOLT, M8X1.25X20.0 MM (W/SEAL PATCH)	8	8	8						
<b>9.1430 - FLANGE, PROPELLER DRIVE</b>											
<b>8924622</b>		FLANGE	1	1	1						

## GROUP NOMENCLATURE

1.0000	ENGINE (less major assemblies)	5.0000	COOLING SYSTEM (CONT'D)
1.1000	Cylinder Block	5.4000B	Fan Shroud
1.1000A	Air Box Drains	5.5000A	Heat Exchanger or Keel Cooling
1.2000	Cylinder Head	5.6000A	Raw Water Pump
1.2000A	Engine Lifter Bracket	5.7000A	Water Filter
1.3000	Crankshaft, Oil Seals and Stabilizers		
1.3000A	Crankshaft Front Cover	6.0000	EXHAUST SYSTEM
1.3000B	Vibration Damper	6.1000A	Exhaust Manifold and/or Connections
1.3000C	Crankshaft Pulley	6.2000A	Exhaust Muffler and/or Connections
1.3000D	Crankshaft Pulley Belt		
1.4000A	Flywheel	7.0000	ELECTRICAL--INSTRUMENTS
1.5000A	Flywheel Housing	7.1000A	Battery Charging Generator
1.5000B	Flywheel Housing Adaptor	7.2000A	Battery Cables
1.6000	Connecting Rod and Piston	7.2000B	Automatic Starting
1.7000	Camshaft and Gear Train	7.2000B	Automatic Starting (Twin and Quad)
1.7000A	Balance Weight Cover	7.3000A	Starting Motor
1.7000B	Accessory Drive	7.4000A	Instruments
1.8000	Valve and Injector Operating Mechanism	7.4000A	Instruments (Twin and Quad)
1.8000A	Rocker Cover	7.4000B	Tachometer Drive
		7.4000B	Tachometer Drive (Twin and Quad)
		7.4000C	Shutoff, Alarm and O.S. Governor
		7.4000C	Shutoff, Alarm and O.S. Governor (Twin and Quad)
2.0000	FUEL SYSTEM	7.5000A	Power Generator
2.1000A	Fuel Injector	7.6000A	Control Cabinet
2.2000	Fuel Pump	7.6000A	Control Cabinet (Twin and Quad)
2.2000A	Fuel Pump Drain	7.7000A	Wiring Harness
2.3000A	Fuel Filter and Strainer	7.8000A	Air Heater
2.3000A	Fuel Filter and Strainer (Twin and Quad)	7.8000A	Air Heater (Twin and Quad)
2.4000	Fuel Manifold and/or Connections	7.10000A	Hydraulic Governor Solenoid
2.4000A	Dual Fuel System		
2.5000A	Fuel Lines and Fuel Cooler	8.0000	POWER TAKE-OFF
2.5000A	Fuel Lines and Fuel Cooler (Twin and Quad)	8.1000A	Power Take-off and/or Clutch
2.6000A	Fuel Tank	8.1000A	Power Take-off and/or Clutch (Twin and Quad)
2.6000B	Electric Governor	8.3000A	Torque Converter
2.7000A	Mechanical Governor	8.3000A	Torque Converter (Twin and Quad)
2.8000A	Hydraulic Governor	8.3000B	Transmission Lines
2.9000	Injector Controls		
2.9000	Injector Controls (Twin and Quad)	9.0000	TRANSMISSION AND PROPULSION
2.9000A	Throttle Controls	9.1000A	Hydraulic Marine Gear
2.9000A	Throttle Controls (Twin and Quad)	9.1000A	Hydraulic Marine Gear (Twin and Quad)
		9.2000A	Reverse and Reduction Gear (mechanical)
3.0000	AIR SYSTEM	9.3000A	Power Transfer Gear
3.1000A	Air Cleaner and/or Adaptor	9.3000A	Power Transfer Gear (Twin and Quad)
3.2000A	Air Silencer	9.4000	Transmission--Highway
3.3000A	Air Inlet Housing	9.7000	Transmission--Off-highway
3.4000	Blower and Drive	9.9000	Transmission--Rail Car
3.4000A	Blower Drive Shaft		
3.4000B	Blower End Plate Cover	10.0000	SHEET METAL
3.5000A	Turbocharger, Intercooler, and Aftercooler	10.1000A	Engine Hood
4.0000	LUBRICATING SYSTEM	11.0000	ENGINE MOUNTING
4.1000A	Oil Pump	11.1000A	Engine Mounting and Base
4.1000B	Oil Distribution System	11.1000A	Engine Mounting and Base (Twin and Quad)
4.1000C	Oil Pressure Regulator		
4.2000A	Oil Filter	12.0000	MISCELLANEOUS
4.3000A	Oil Filter Lines	12.2000A	Bilge Pump
4.4000A	Oil Cooler and Marine Gear Lines	12.3000A	Vacuum Pump
4.5000A	Oil Filler	12.4000A	Air Compressor
4.6000A	Dipstick	12.5000A	Hydraulic Pump
4.7000A	Oil Pan	12.6000A	Gasoline Starter
4.8000A	Ventilating System	12.6000B	Air Starter
		12.6000C	Cold Weather Starting Aid
5.0000	COOLING SYSTEM	12.6000D	Hydraulic Starter
5.1000	Fresh Water Pump	12.6000E	Hydraulic Starter Accessories
5.1000A	Fresh Water Pump Cover	12.8000A	Supplies
5.2000A	Water Outlet Manifold and/or Elbow	12.8000B	Fabrication Material
5.2000B	Thermostat	12.8000C	Miscellaneous Service Kits and Sets
5.2000C	Water Bypass Tube	12.8000D	Miscellaneous Service Parts
5.3000A	Radiator		
5.3000B	Water Connections		
5.4000A	Fan		

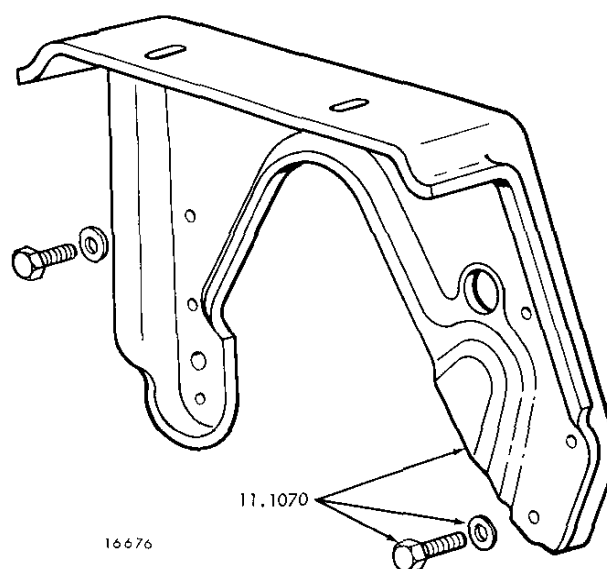


FIG. 1A ENGINE FRONT SUPPORT

## 11.1000A ENGINE MOUNTING AND BASE

PART			TYPES															
FIG	NUMBER	NAME AND DESCRIPTION	6 4 7	6 5 6	6 6 7	6 6 8	6 6 9	6 7 0										
<b>11.1070 - SUPPORT, ENGINE FRONT</b>																		
1A	8920186	SUPPORT	1															
1A	8922493	SUPPORT		1														
	8922954	SUPPORT					1											
	8922955	SUPPORT						1										
	8923077	SUPPORT, L.H.			1	1												
	8923078	SUPPORT, R.H.			1	1												
	8923079	SUPPORT, STRAP			1	1												
	8922228	BOLT, M10X1.5X25.0 MM (12.9001)			1	1												
	11500724	BOLT, M10X1.5X30.0 MM (12.9001)			1	1												
	11500725	BOLT, M10X1.5X35.0 MM (12.9001)			3	3												
	8923287	BOLT, M10X1.5X50.0 MM					2	2										
	11500891	BOLT, M12X1.75X35.0 MM (12.9001)			2	2												
1A	8922194	BOLT, M10X1.50X35.0 MM (W/LK. PATCH)	4	4														
1A	8922039	BOLT, M12X1.75X35.0 MM	2	2														
	8920162	BOLT, M12X1.75X50.0 MM (12.9001)					2	2										
1A	5131913	WASHER, 13/16"X29/64"X5/32" SPECIAL (3.4001)	4	4			2	2										
1A	5131978	WASHER, .53"X1.00" SPECIAL (1.5001)	2	2			2	2										
	11501052	NUT, M10X1.5 (12.9120)			1	1												
<b>11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC</b>																		
	8923234	MOUNTS, RUBBER			4	4												
<b>11.1100 - SUPPORT, ENGINE REAR</b>																		
	8923080	SUPPORT					2											
	179882	BOLT, 1/2"-13X1 1/8" (12.9001)					4											
	103323	LOCKWASHER, 1/2" (12.9200)					4											

## GROUP NOMENCLATURE

1.0000	ENGINE (less major assemblies)	5.0000	COOLING SYSTEM (CONT'D)
1.1000	Cylinder Block	5.4000B	Fan Shroud
1.1000A	Air Box Drains	5.5000A	Heat Exchanger or Keel Cooling
1.2000	Cylinder Head	5.6000A	Raw Water Pump
1.2000A	Engine Lifter Bracket	5.7000A	Water Filter
1.3000	Crankshaft, Oil Seals and Stabilizers		
1.3000A	Crankshaft Front Cover	6.0000	EXHAUST SYSTEM
1.3000B	Vibration Damper	6.1000A	Exhaust Manifold and/or Connections
1.3000C	Crankshaft Pulley	6.2000A	Exhaust Muffler and/or Connections
1.3000D	Crankshaft Pulley Belt		
1.4000A	Flywheel	7.0000	ELECTRICAL--INSTRUMENTS
1.5000A	Flywheel Housing	7.1000A	Battery Charging Generator
1.5000B	Flywheel Housing Adaptor	7.2000A	Battery Cables
1.6000	Connecting Rod and Piston	7.2000B	Automatic Starting
1.7000	Camshaft and Gear Train	7.2000B	Automatic Starting (Twin and Quad)
1.7000A	Balance Weight Cover	7.3000A	Starting Motor
1.7000B	Accessory Drive	7.4000A	Instruments
1.8000	Valve and Injector Operating Mechanism	7.4000A	Instruments (Twin and Quad)
1.8000A	Rocker Cover	7.4000B	Tachometer Drive
		7.4000B	Tachometer Drive (Twin and Quad)
2.0000	FUEL SYSTEM	7.4000C	Shutoff, Alarm and O.S. Governor
2.1000A	Fuel Injector	7.4000C	Shutoff, Alarm and O.S. Governor (Twin and Quad)
2.2000	Fuel Pump	7.5000A	Power Generator
2.2000A	Fuel Pump Drain	7.6000A	Control Cabinet
2.3000A	Fuel Filter and Strainer	7.6000A	Control Cabinet (Twin and Quad)
2.3000A	Fuel Filter and Strainer (Twin and Quad)	7.7000A	Wiring Harness
2.4000	Fuel Manifold and/or Connections	7.8000A	Air Heater
2.4000A	Dual Fuel System	7.8000A	Air Heater (Twin and Quad)
2.5000A	Fuel Lines and Fuel Cooler	7.10000A	Hydraulic Governor Solenoid
2.5000A	Fuel Lines and Fuel Cooler (Twin and Quad)		
2.6000A	Fuel Tank	8.0000	POWER TAKE-OFF
2.6000B	Electric Governor	8.1000A	Power Take-off and/or Clutch
2.7000A	Mechanical Governor	8.1000A	Power Take-off and/or Clutch (Twin and Quad)
2.8000A	Hydraulic Governor	8.3000A	Torque Converter
2.9000	Injector Controls	8.3000A	Torque Converter (Twin and Quad)
2.9000	Injector Controls (Twin and Quad)	8.3000B	Transmission Lines
2.9000A	Throttle Controls		
2.9000A	Throttle Controls (Twin and Quad)	9.0000	TRANSMISSION AND PROPULSION
		9.1000A	Hydraulic Marine Gear
3.0000	AIR SYSTEM	9.1000A	Hydraulic Marine Gear (Twin and Quad)
3.1000A	Air Cleaner and/or Adaptor	9.2000A	Reverse and Reduction Gear (mechanical)
3.2000A	Air Silencer	9.3000A	Power Transfer Gear
3.3000A	Air Inlet Housing	9.3000A	Power Transfer Gear (Twin and Quad)
3.4000	Blower and Drive	9.4000	Transmission--Highway
3.4000A	Blower Drive Shaft	9.7000	Transmission--Off-highway
3.4000B	Blower End Plate Cover	9.9000	Transmission--Rail Car
3.5000A	Turbocharger, Intercooler, and Aftercooler		
		10.0000	SHEET METAL
4.0000	LUBRICATING SYSTEM	10.1000A	Engine Hood
4.1000A	Oil Pump		
4.1000B	Oil Distribution System	11.0000	ENGINE MOUNTING
4.1000C	Oil Pressure Regulator	11.1000A	Engine Mounting and Base
4.2000A	Oil Filter	11.1000A	Engine Mounting and Base (Twin and Quad)
4.3000A	Oil Filter Lines		
4.4000A	Oil Cooler and Marine Gear Lines	12.0000	MISCELLANEOUS
4.5000A	Oil Filler	12.2000A	Bilge Pump
4.6000A	Dipstick	12.3000A	Vacuum Pump
4.7000A	Oil Pan	12.4000A	Air Compressor
4.8000A	Ventilating System	12.5000A	Hydraulic Pump
		12.6000A	Gasoline Starter
5.0000	COOLING SYSTEM	12.6000B	Air Starter
5.1000	Fresh Water Pump	12.6000C	Cold Weather Starting Aid
5.1000A	Fresh Water Pump Cover	12.6000D	Hydraulic Starter
5.2000A	Water Outlet Manifold and/or Elbow	12.6000E	Hydraulic Starter Accessories
5.2000B	Thermostat	12.8000A	Supplies
5.2000C	Water Bypass Tube	12.8000B	Fabrication Material
5.3000A	Radiator	12.8000C	Miscellaneous Service Kits and Sets
5.3000B	Water Connections	12.8000D	Miscellaneous Service Parts
5.4000A	Fan		



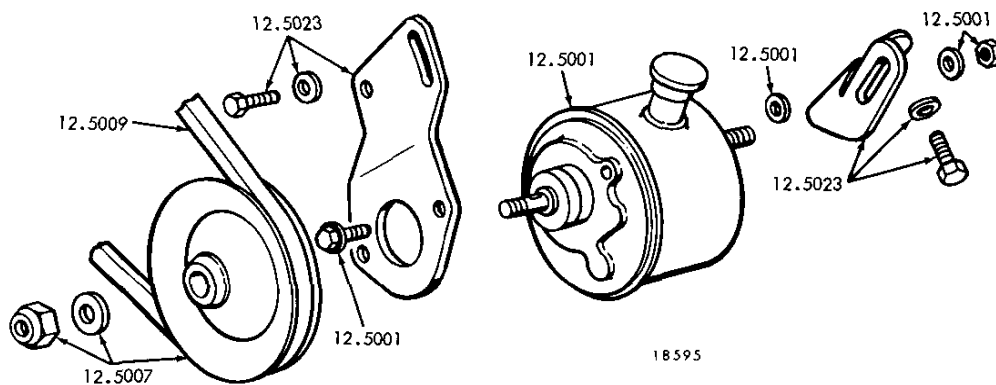


FIG. 1A HYDRAULIC PUMP

## 12.4000A AIR COMPRESSOR

PART ..FIG .. NUMBER .....		NAME AND DESCRIPTION .....		TYPES																
		1 1 9 5	1 1 9 6	1 2 1 8	1 2 3 8															
<b>12.4001 - COMPRESSOR ASSY., AIR</b>																				
		COMPONENTS OF AIR COMPRESSOR ASSYS. ARE NOT SERVICED BY DDA. FOR COMPONENT REPLACEMENT CONTACT BENDIX WESTINGHOUSE (B.W.) OR MIDLAND ROSS (M.R.) FURNISH THEIR ASSEMBLY PART NUMBER WHICH IS SHOWN IN PARENTHESES.																		
<b>NPN</b>		COMPRESSOR ASSY. (CUSTOMER FURNISHED)																		
<b>8922696</b>		COMPRESSOR ASSY., 12 CFM (M.R. #N-7002-AA)																		
<b>8923197</b>		COMPRESSOR ASSY., TU-FLO 501 (B.W. #102688)																		
<b>5106141</b>		COMPRESSOR ASSY., 7 1/4 CFM (M.R. #N-5 308-B)																		
<b>5145014</b>		PLUG, 3/8" PIPE (12.9550)																		
<b>454933</b>		BOLT, 7/16"-14X1 1/8" (12.9001)																		
<b>103322</b>		LOCKWASHER, 7/16" (12.9200)																		
<b>12.4010 - BRACKET, AIR COMPRESSOR MOUNTING</b>																				
<b>8922537</b>		BRACKET																		
<b>8922536</b>		SUPPORT, BRACKET (FRONT)																		
<b>8922535</b>		SUPPORT, BRACKET (REAR)																		
<b>8922540</b>		BRACKET, ADJ. STRAP																		
<b>8923195</b>		BRACKET, ADJ. STRAP																		
<b>8923565</b>		BRACKET																		
<b>8926250</b>		BOLT, M10X1.5X35.0MM (12.9001)																		
<b>11500881</b>		BOLT, M10X1.5X40.0 MM (12.9001)																		
<b>8926242</b>		BOLT, M10X1.5X100.0 MM (12.9001)																		
<b>11501752</b>		BOLT, M16X2X50.0MM (12.9001)																		
<b>11501754</b>		BOLT, M16X2X70.0MM (12.9001)																		
<b>8922542</b>		BOLT, 5/16"-18X1 1/4" (W/SEALANT) (12.9001)																		
<b>11502474</b>		WASHER, M10 (12.9190)																		
<b>11500242</b>		WASHER, 16MM (12.9190)																		
<b>11501055</b>		NUT, M16X2.0 (12.9120)																		
<b>103025</b>		NUT, 5/16"-24 (12.9120)																		
<b>12.4011 - STRAP, AIR COMPRESSOR MOUNTING BRACKET ADJUSTING</b>																				
<b>8922539</b>		STRAP																		
<b>8923194</b>		STRAP																		
<b>8923573</b>		STRAP																		
<b>11500877</b>		BOLT, M10X1.5X20.0MM (12.9001)																		
<b>11500724</b>		BOLT, M10X1.5X30.0MM (12.9001)																		
<b>103341</b>		WASHER, 3/8" (12.9190)																		
<b>11502474</b>		WASHER, M10 (12.9190)																		
<b>11501033</b>		NUT, M10X1.5 (12.9190)																		
<b>12.4015 - PULLEY, AIR COMPRESSOR</b>																				
<b>8922534</b>		PULLEY, SINGLE .50" VEE GROOVE																		

## 12.4000A AIR COMPRESSOR

PART		NAME AND DESCRIPTION	TYPES													
FIG	NUMBER		1	1	1	1										
			1	1	1	1										
			9	9	2	2										
			5	6	8	8										
12.4019 - BRACKET, BELT GUIDE																
8922541		BRACKET	1	1	1	1										
11500729		BOLT, M10X1.5X85.0MM (12.9001)	1	1	1	1										
8926242		BOLT, M10X1.5X100.0MM (12.9001)	1	1	1	1										

## 12.4000A AIR COMPRESSOR

PART		TYPES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				</
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## 12.4000A AIR COMPRESSOR

PART		TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	1	1	1	1							
			1	1	1	1							
			1	1	2	2							
			9	9	1	3							
			5	6	8	8							
12.4095 - CLIP, AIR COMPRESSOR WATER TUBE													
2362448		CLIP, .688" (12.8554)	1	1	1	1							
5145429		CLIP, 7/8" (7.8320)	2	2	2	2							
5101020		STRAP, HOSE (2.5255)				1							

## 12.5000A HYDRAULIC PUMP

PART			TYPES									
FIG	NUMBER	NAME AND DESCRIPTION	1 7 6	1 7 9	1 8 1							
<b>12.5001 - PUMP ASSY., HYDRAULIC</b>												
	<b>NPN</b>	PUMP (CUSTOMER FURNISHED)		1								
1A	<b>7840125</b>	PUMP, POW. STEERING	1									
1A	<b>7840126</b>	PUMP, POW. STEERING			1							
1A	<b>9419885</b>	BOLT, 3/8"-16X3/4" (12.9001)	2		2							
1A	<b>9422277</b>	NUT, 3/8"-16	1		1							
1A	<b>666674</b>	WASHER, 3/8"	2		2							
<b>12.5007 - PULLEY, HYDRAULIC PUMP DRIVE</b>												
1A	<b>8922533</b>	PULLEY, P/S 1 GRV	1		1							
1A	<b>2436165</b>	WASHER, 1/2"	1		1							
1A	<b>9418222</b>	NUT, 1/2"-20 (12.9120)	1		1							
<b>12.5009 - BELT, HYDRAULIC PUMP DRIVE</b>												
1A	<b>9433882</b>	BELT, V, .50"X38.5", 3 PLY	1		1							
<b>12.5023 - BRACKET, HYDRAULIC PUMP SUPPORT</b>												
1A	<b>8922532</b>	BRACKET, FRONT	1	1	1							
1A	<b>8922531</b>	BRACKET, REAR	1	1	1							
1A	<b>11500929</b>	BOLT, M10X1.5X25 MM (12.9001)	4	4	4							
1A	<b>11502474</b>	WASHER, M10 (12.9190)	4	4	4							

[illegible]

<b>8922443</b>	SEALANT, RTV 88 ML. ....	AR
<b>8922442</b>	SEALANT, RTV 305 ML. ....	AR

.COLUMN

**A**

AR

AR

AR

AR

AR

## 12.8000C SERVICE KITS AND SETS

PART		COLUMN											
FIG	NUMBER	NAME AND DESCRIPTION	A										
<b>12.8715 - KITS, SERVICE (ALL)</b>													
<b>8924126</b>		GASKET KIT, ENGINE OVERHAUL TURBO (1.1002)	AR										
<b>8924117</b>		GASKET KIT, ENGINE OVERHAUL TURBO (1.1002)	AR										
<b>8924127</b>		GASKET KIT, CYLINDER HEAD OVERHAUL TURBO (1.2002)	AR										
<b>8924118</b>		GASKET KIT, CYLINDER HEAD OVERHAUL NON-TURBO (1.2002)	AR										
<b>5149724</b>		TUBE KIT, INJECTOR HOLE (1.2045)	AR										
<b>8922110</b>		CAM BEARING KIT (STD) (1.7040)	AR										
<b>8922394</b>		CAM BEARING KIT (.5MM O.S.) (1.7040)	AR										
<b>5229930</b>		SERVICE KIT, INJECTOR (2.1002)	AR										
<b>5199560</b>		PUMP KIT, FUEL (2.2001)	AR										
<b>5195078</b>		OVERHAUL KIT, FUEL PUMP (2.2004)	AR										
<b>8922981</b>		GOVERNOR LINKAGE LOCK REWORK KIT (2.7001)	AR										
<b>5149876</b>		GOVERNOR CONVERSION KIT (3000 RPM) (2.7012)	AR										
<b>8922708</b>		GOVERNOR CONVERSION KIT (3000 RPM) (2.7012)	AR										
<b>8922983</b>		BREATHER SYSTEM REWORK KIT (4.8046)	AR										
<b>8922901</b>		GOVERNOR CONVERSION KIT (2000 RPM TO 3000 RPM) (2.7012)	AR										
<b>8924376</b>		RECONDITIONING KIT, FRESH WATER PUMP (5.1002)	AR										
<b>12.8720 - SETS, SERVICE (ALL)</b>													
<b>8921712</b>		SHELL SET, CRANKSHAFT MAIN BEARING (STD) (1.3090)	AR										
<b>8922948</b>		SHELL SET, CRANKSHAFT MAIN BEARING REAR (STD) (1.3090)	AR										
<b>8921714</b>		SHELL SET, CONNECTING ROD BEARING (1.6100)	AR										
<b>8921721</b>		RING SET, PISTON (STD) (NON-TURBO) (1.6115)	AR										
<b>8921722</b>		RING SET, PISTON (STD) (TURBO) (1.6115)	AR										



## 12.8000D MISCELLANEOUS SERVICE PARTS

PART FIG NUMBER		NAME AND DESCRIPTION	COLUMN											
<b>12.8801 - MISCELLANEOUS SERVICE PARTS - SECTION 1</b>			A											
8920427	*	GUIDE, FLYWHEEL HOUSING TIMING PIN (1.5106)	1											
8920428	*	PLATE, FLYWHEEL HOUSING TIMING PIN (1.5106)	1											
8922990		PLUG, FLYWHEEL HOUSING TIMING PIN (1.5001)	1											
	*	OBSOLETE.												
	*	THIS ENGINE DOES NOT CONTAIN A FLYWHEEL, EXHAUST MANIFOLDS OR A WATER PUMP PULLEY.												
	+	THIS ENGINE DOES NOT CONTAIN A FLYWHEEL OR A WATER PUMP PULLEY.												
<b>12.8802 - MISCELLANEOUS SERVICE PARTS - SECTION 2</b>														
12010085		TERMINAL, EEC GOVERNOR MALE (2.6645)	AR											
12015323		SEAL, EEC GOVERNOR WIRE (2.6650)	AR											
12020089		BODY AND SEAL ASSY., EEC GOVERNOR (6 WAY CONNECTOR) (2.6655)	AR											
12010300		PLUG, EEC GOVERNOR CAVITY	AR											
5145783		PLUNGER, GOVERNOR HIGH SPEED (2.7563)	AR											
5101709		PLUNGER, GOVERNOR HIGH SPEED (2.7563)	AR											
5145784		RETAINER, GOVERNOR HIGH SPEED SPRING (2.7610)	AR											
5140045		LOCKNUT, LOW SPEED PLUNGER RETAINER (2.7561)	AR											
5102803		COUPLING, LOW SPEED ADJUSTING (2.7558)	AR											
5145781		CAP, GOVERNOR LOW SPEED SPRING (2.7580)	AR											
5145638		SPRING, GOVERNOR LOW SPEED (2.7540)	AR											
5145780		SPRING, GOVERNOR LOW SPEED OUTER (2.7540)	AR											
5140051		SHAFT, LOW SPEED SPRING PLUNGER (2.7557)	AR											
5145782		PLUNGER, GOVERNOR LOW SPEED (2.7560)	AR											
5140049		RETAINER, GOVERNOR LOW SPEED ADJUSTING (2.7561)	AR											
5182558		LOCKNUT (2.7615)	AR											
5102804		HOUSING, GOVERNOR SPRING (2.7690)	AR											
8922593		GASKET, GOVERNOR SPRING HOUSING (2.7650)	AR											
8922515		SHAFT ASSY., FLEX (54" LONG) (2.7012)	AR											
5102810		RING, SEAL (2.7694)	AR											
8922676		SPRING, GOVERNOR HIGH SPEED (2.7550)	AR											
8922280		SPRING, GOVERNOR HIGH SPEED (2.7550)	AR											
5101708		CAP, RETAINER (2.7561)	AR											
5101706		PISTON, GOVERNOR VARIABLE LOW SPEED (2.7736)	AR											
5101705		PLUNGER, GOVERNOR VARIABLE LOW SPEED (2.7560)	AR											

## 12.8000D MISCELLANEOUS SERVICE PARTS

PART  
..FIG ... NUMBER ..... NAME AND DESCRIPTION .....

COLUMN

**12.8804 - MISCELLANEOUS SERVICE PARTS-SECTION 4**

**8925360** \* ADAPTOR, OIL PAN SEAL ..... AR  
\* FOR USE WITH ISOLATED OIL PAN  
8922782 AND OLD STYLE FRONT  
COVER 8922074.

**12.8805 - MISCELLANEOUS SERVICE PARTS - SECTION 5**

**8922806** ELBOW, WATER OUTLET (RB) (5.3443) ..... AR  
**8925832** PLUG, 3/8" ZINC (5.5001) ..... AR  
**8925835** COVER, HEAT EXCHANGER (5.5030) ..... AR  
**8925833** WASHER, FIBER (5.5030) ..... AR  
**8925834** GASKET, HEAT EXCHANGER COVER  
(5.5050) ..... AR  
**11500775** BOLT, M8X1.25X50.0 MM (12.9001) ..... AR

**12.8807 - MISCELLANEOUS SERVICE PARTS - SECTION 7**

**8927033** GASKET (BETWEEN SOLENOID AND  
PLUNGER ASSY.) (7.4519) ..... AR

# Detroit Diesel Engines

## 8.2 Liter Parts Catalog

